Jan Delaval please.

Access DB# 80402

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Ganapathy Krishnan Examiner #: 79271 Date: 11/18/02
Art Unit: 1623 Phone Number 30 5-4537 Serial Number: 10054724
Mail Box and Bldg/Room Location: 8D08 (8B17) Results Format Preferred (circle): PAPER DISK E-MAIL

If mor than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Solid and Solution phase Synthesis of heparin and other glycosaminoglycans.

Inventors (please provide full names): Peter H. Seeberger; Hernan Orgueira; Peter Schell

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Need structure search for claims 1, 5, 6, and 10.

AND

Search for method claims: 11 and 18.

RECEIVED
NOV 18 2002
TECH CENTER 1600/2900

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

****

STAFF USE ONLY

Searcher: Jan
Searcher Phone #: 4498
Searcher Location: _____
Date Searcher Picked Up: 11/19/02
Date Completed: 11/19/02
Searcher Prep & Review Time: _____
Clerical Prep Time: 20
Online Time: + 75

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) ✓
Bibliographic 1
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN ✓
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

PTO-1590 (8-01)

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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   18 NOV 2002  HIGHEST RN 473870-51-8
DICTIONARY FILE UPDATES:  18 NOV 2002  HIGHEST RN 473870-51-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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L1              STR
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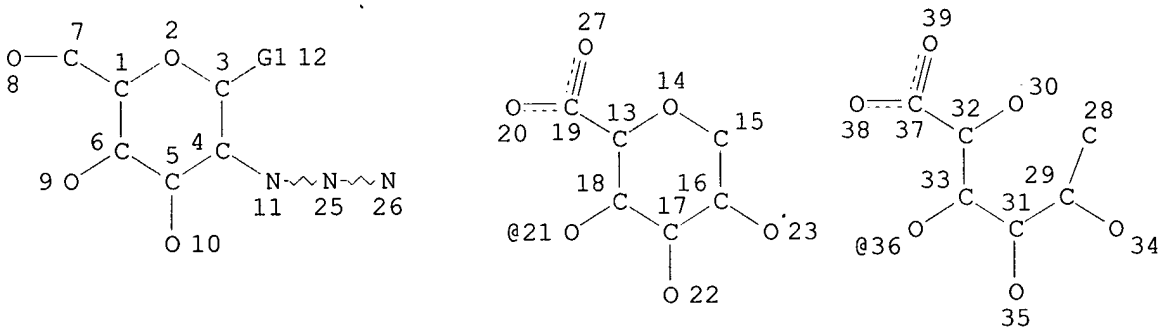


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NUMBER OF NODES IS  38

STEREO ATTRIBUTES: NONE
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L4              STR
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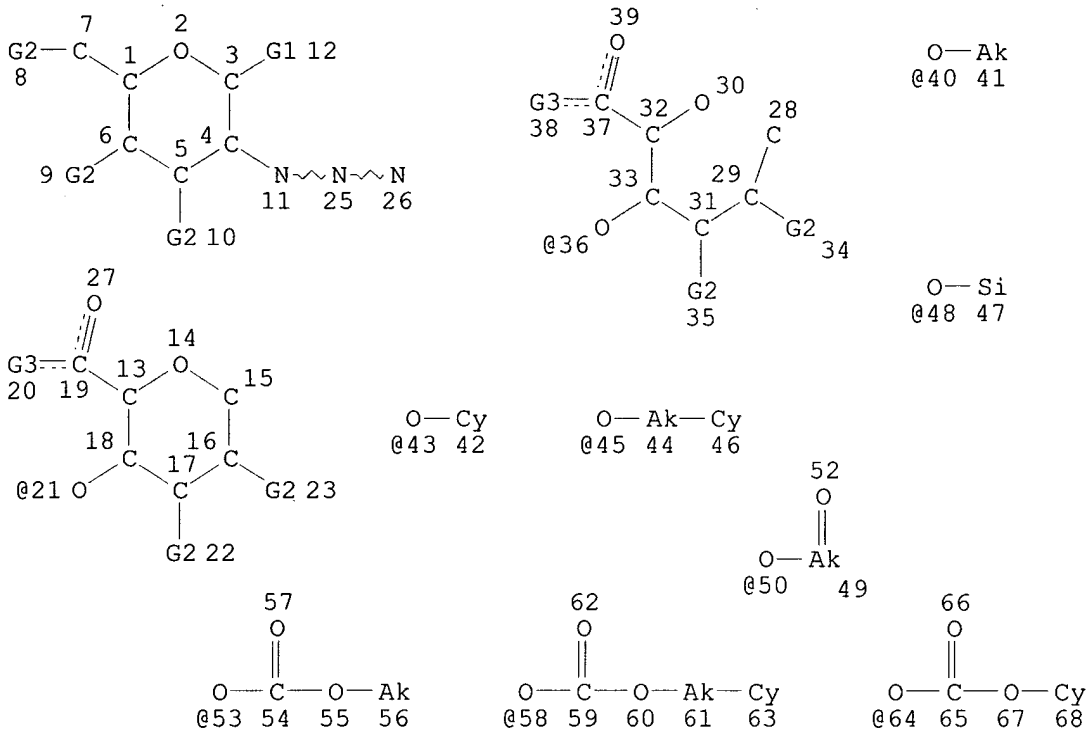
Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov



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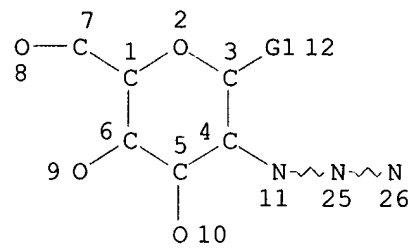

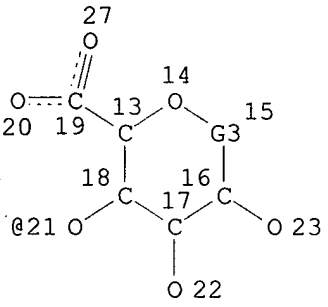

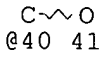

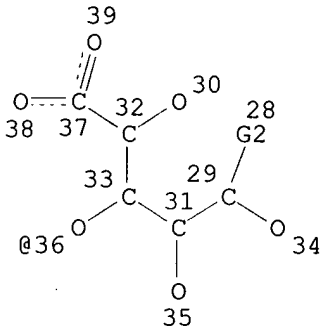

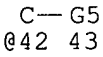

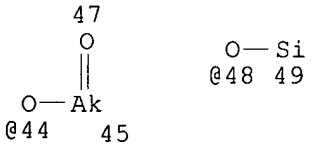

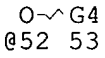

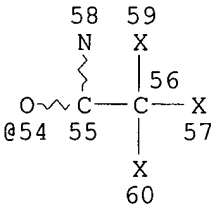

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 58

STEREO ATTRIBUTES: NONE
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L12 5 SEA FILE=REGISTRY ABB=ON PLU=ON L10 AND (C88H101N9O31 OR C76H98N6O26SI OR C113H133N9O36 OR C67H82N6O28 OR C62H75CLN6O26)

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                OR C55H60CL3N7O18 OR C54H62N6O18 OR C47H54N6O15 OR C55H60CL3N7O
                18 OR C31H44CL3N7O18 OR C55H62N6O19 OR C34H44N4O13 OR C53H60N6O
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=> d his

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                SET COST OFF

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L2            18 S L1
L3           296 S L1 FUL
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L4                STR L1
L5             9 S L4 CSS SAM SUB=L3
L6           137 S L4 CSS FUL SUB=L3
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L7                STR L1
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L9             3 S L8 CSS SAM SUB=L6
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L11           16 S L10 AND (C65H80N6O27 OR C114H130N12O41 OR C70H84N6O26 OR C68H
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L17           54 S L14 NOT L16
L18          159 S L3 NOT L6
L19           17 S L18 AND (C42H51N3O13 OR C43H64CLN3O13SI2 OR C58H69N3O20 OR C4
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L22           21 S L20,L21
                SAV L22 KRISH054E/A

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     FILE 'HCAPLUS' ENTERED AT 10:52:25 ON 19 NOV 2002
L25           28 S L16 OR L22
L26            2 S L25 AND (SEEBERGER ? OR ORGUEIRA ? OR SCHELL ?)/AU
L27           26 S L25 AND (PD<=20010123 OR PRD<=20010123 OR AD<=20010123)
L28            1 S L25 NOT L26,L27
L29           25 S L27 NOT L26

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CA INDEXING COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 10:55:31 ON 19 NOV 2002
CA INDEXING COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

=>
=> d l24 bib abs hitstr tot

L24  ANSWER 1 OF 6  USPATFULL
AN     91:7120  USPATFULL
TI     Derivatives of the uronic acid
IN     Choay, Jean, Paris, France
       Jacquinet, Jean-Claude, Orleans-La-Source, France
       Petitou, Maurice, Paris, France
       Sinay, Pierre, Orleans, France
PA     Choay S.A., Paris, France (non-U.S. corporation)
PI     US 4987223              19910122
AI     US 1982-453731          19821027 (6)
PRAI   FR 1981-24132       19811223
       FR 1982-621         19820115
       FR 1982-1575        19820201
       FR 1982-2526        19820216
       FR 1982-9392        19820528
       FR 1982-10891       19820622
       FR 1982-10892       19820622
       FR 1982-13804       19820806
       FR 1982-15803       19820920
       FR 1982-15804       19820920
       FR 1982-18001       19821027
DT     Utility
FS     Granted
EXNAM  Primary Examiner: Brown, Johnnie R.; Assistant Examiner: Peselev, Elli
LREP   Davis Hoxie Faithfull & Hapgood
CLMN   Number of Claims: 6
ECL    Exemplary Claim: 1
DRWN   16 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 1591
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     The invention relates to derivatives with a uronic acid structure having
       substituents selected among a reactive group, a functionalisable group
       and --OH functions blocked by protective groups. These derivatives are
       useful for preparing glycosides, particularly enzyme substrates.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT  85750-89-6P
       (prepn. and sapon. of)
RN   85750-89-6  USPATFULL
CN   .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-
       deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-
       (phenylmethyl)-, methyl ester (9CI)  (CA INDEX NAME)

       Absolute stereochemistry.
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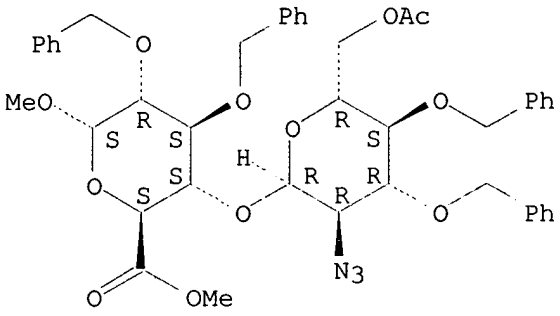
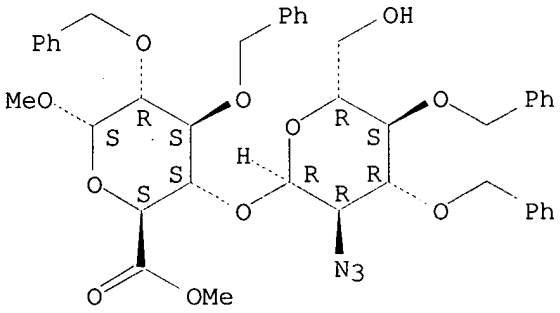


IT **85743-92-6P**
(prepn. and sulfonylation of)
RN 85743-92-6 USPATFULL
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

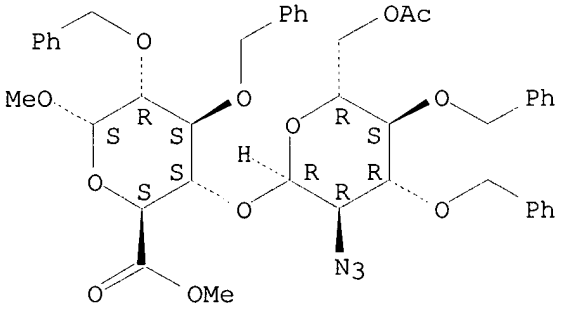


L24 ANSWER 2 OF 6 USPATFULL
AN 90:57857 USPATFULL
TI Method for carrying out the organic synthesis of oligosaccharides containing galactosamine-uronic acid patterns, new oligosaccharides obtained and biological applications thereof
IN Jacquinet, Jean-Claude, Orleans-La Source, France
Petitou, Maurice, Paris, France
Sinay, Pierre, Orleans, France
Choay, Jean, Paris, France
PA Choay, S.A., Paris, France (non-U.S. corporation)
PI US 4943630 19900724
AI US 1986-856855 19860421 (6)
DCD 20030819
RLI Continuation of Ser. No. US 1984-624628, filed on 26 Jun 1984, now abandoned
PRAI FR 1982-18003 19821027
DT Utility
FS Granted
EXNAM Primary Examiner: Griffin, Ronald W.
LREP Davis, Hoxie, Faithfull & Hapgood
CLMN Number of Claims: 53
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 2205
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel processes for synthesizing acid mucopolysaccharide fragments

having from 2-12 saccharides and substantially pure products of a single structure produced thereby. Condensation are disclosed between a first protected saccharide and a second protected saccharide to form a protected condensation product having units linked in the manner found in chondroitin sulfate and dermatan sulfate and having protecting groups thereon which allow selective positioning of functional groups, in particular sulfate, at desired positions. Other condensations are disclosed in which a protected condensation product is formed which can be elongated, and has protecting groups thereon which allow selective positioning of functional groups, in particular sulfate, at desired positions. Also disclosed is a process for selectively positioning functional groups on a protected acid mucopolysaccharide having from 2-12 units.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **85750-89-6P**
(prepn. and sapon. of)
RN 85750-89-6 USPATFULL
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **85743-92-6P**
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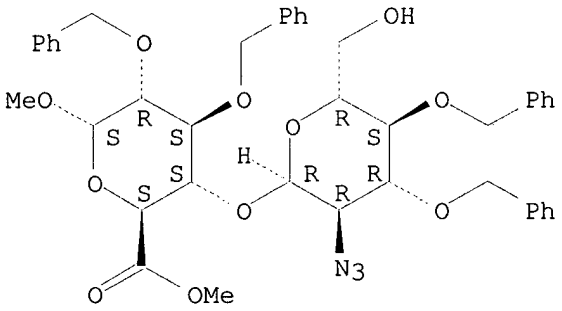
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

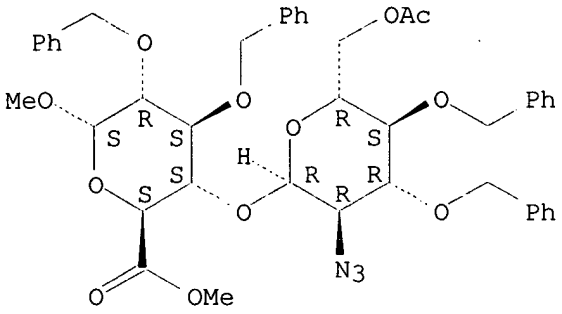


L24 ANSWER 3 OF 6 USPATFULL
AN 89:25905 USPATFULL
TI Process for the organic synthesis of oligosaccharides and derivatives

thereof
IN Petitou, Maurice, Paris, France
Jacquinet, Jean-Claude, Orleans la Source, France
Sinay, Pierre, Orleans la Source, France
Choay, Jean, Paris, France
Lormeau, Jean-Claude, Maromme, France
Nassr, Mahmoud, Alexandria, Egypt
PA Choay, S.A., Paris, France (non-U.S. corporation)
PI US 4818816 19890404
AI US 1987-115593 19871026 (7)
DCD 20030819
RLI Continuation of Ser. No. US 1983-457931, filed on 14 Jan 1983, now abandoned which is a continuation-in-part of Ser. No. US 1982-451615, filed on 20 Dec 1982, now patented, Pat. No. US 4607025
PRAI FR 1981-8472 19810428
FR 1982-621 19820115
FR 1982-1675 19820201
FR 1982-2526 19820216
FR 1982-9392 19820528
FR 1982-10892 19820622
FR 1982-10891 19820622
FR 1982-11679 19820702
FR 1982-13804 19820806
FR 1982-15803 19820920
FR 1982-15804 19820920
FR 1982-18003 19821027
DT Utility
FS Granted
EXNAM Primary Examiner: Rollins, John
LREP Davis, Hoxie, Faithfull & Hapgood
CLMN Number of Claims: 61
ECL Exemplary Claim: 1
DRWN 32 Drawing Figure(s); 32 Drawing Page(s)
LN.CNT 3919
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to a process for the organic synthesis of oligosaccharides constituting or comprising fragments of acid mucopolysaccharides comprising the reaction of two compounds constituted or terminated by units of glucosamine structure and of uronic acid structure respectively, said units being specifically substituted. This process particularly enables valuable anticoagulant drugs to be obtained.

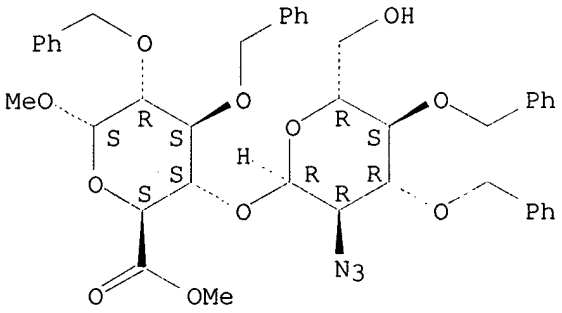
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **85750-89-6P**
(prepn. and sapon. of)
RN 85750-89-6 USPATFULL
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **85743-92-6P**
(prepn. and sulfonylation of)
RN 85743-92-6 USPATFULL
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

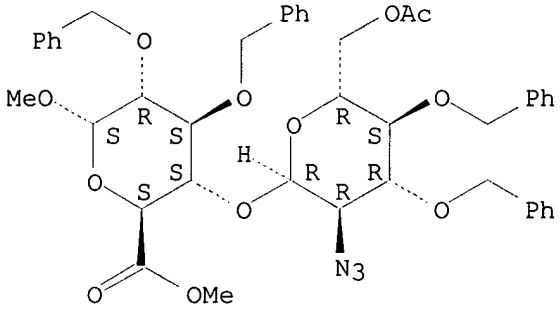


L24 ANSWER 4 OF 6 USPATFULL
AN 89:7549 USPATFULL
TI Oligosaccharides and their biological applications
IN Petitou, Maurice, Paris, France
Lormeau, Jean-Claude, Maromme, France
Choay, Jean, Paris, France
Jacquinet, Jean-Claude, Orleans, la Source, France
Sinay, Pierre, Orleans, la Source, France
PA Choay S.A., Paris, France (non-U.S. corporation)
PI US 4801583 19890131
AI US 1985-734445 19850515 (6)
RLI Continuation-in-part of Ser. No. US 1983-457931, filed on 14 Jan 1983, now abandoned
PRAI FR 1982-621 19820115
FR 1982-1575 19820201
FR 1982-2526 19820216
FR 1982-9392 19820528
FR 1982-10891 19820622
FR 1982-10892 19820622
FR 1982-11679 19820702
FR 1982-13804 19820806
FR 1982-15804 19820920
FR 1982-15803 19820920
FR 1982-18003 19821027
FR 1984-7589 19840516
DT Utility

FS Granted
EXNAM Primary Examiner: Brown, J. R.; Assistant Examiner: Peselel, Elli
LREP Davis Hoxie Faithfull & Hapgood
CLMN Number of Claims: 6
ECL Exemplary Claim: 1,5
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 895
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The oligosaccharides of the invention contain or are constituted by a tetrasaccharide enchainment of the formula: ##STR1## in which R.sub.1 represents an organic anion, R.sub.2 is identical to R.sub.1 or represents a hydrogen atom, N.sub.1 and N.sub.2 represent a functional amino group.

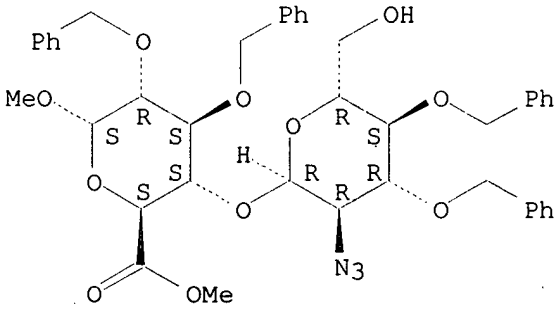
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **85750-89-6P**
(prepn. and sapon. of)
RN 85750-89-6 USPATFULL
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **85743-92-6P**
(prepn. and sulfonylation of)
RN 85743-92-6 USPATFULL
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 5 OF 6 USPATFULL
AN 88:62485 USPATFULL
TI Disaccharides formed by patterns having a glucosamine and uronic acid

structure, preparation thereof and biological applications
IN Petitou, Maurice, Paris, France
Sinay, Pierre, Orleans, France
Choay, Jean, Paris, France
Lormeau, Jean-Claude, Maromme, France
PA Choay S.A., Paris, France (non-U.S. corporation)
PI US 4774231 19880927
AI US 1986-888527 19860721 (6)
RLI Continuation of Ser. No. US 1982-451615, filed on 20 Dec 1982, now patented, Pat. No. US 4607025
PRAI FR 1981-8472 19810428
DT Utility
FS Granted
EXNAM Primary Examiner: Griffin, Ronald W.
LREP Davis Hoxie Faithfull & Hapgood
CLMN Number of Claims: 26
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 512
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB 1,4.alpha.disaccharides of formula: ##STR1## with Z representing a nitrogenous functional group,

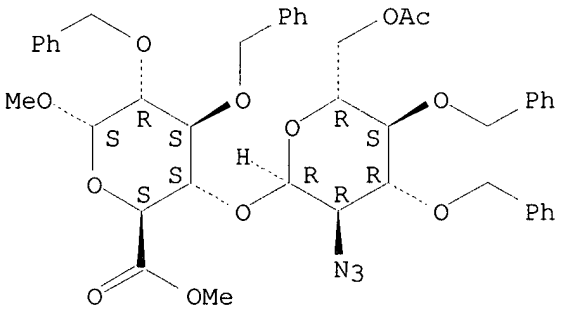
M hydrogen or a sulphate or acetyl group,

R an alkyl radical of 1 to 4 carbon atoms and

A functional group such as an acid group, or a derivative.

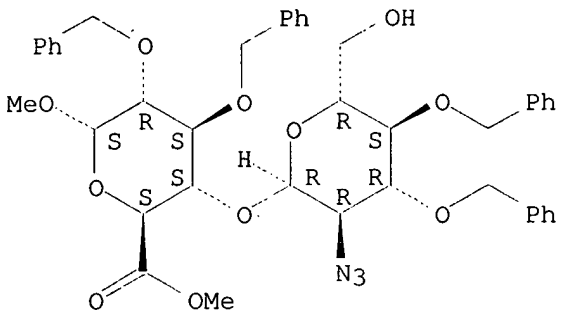
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **85750-89-6P**
(prepn. and sapon. of)
RN 85750-89-6 USPATFULL
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **85743-92-6P**
(prepn. and sulfonylation of)
RN 85743-92-6 USPATFULL
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 6 OF 6 USPATFULL
AN 86:46638 USPATFULL
TI Disaccharides having a glucosamine and uronic acid structure, and biological applications thereof
IN Petitou, Maurice, Paris, France
Sinay, Pierre, Orleans, France
Choay, Jean, Paris, France
Lormeau, Jean-Claude, Maromme, France
PA Choay S.A., Paris, France (non-U.S. corporation)
PI US 4607025 19860819
AI US 1982-451615 19821220 (6)
DT Utility
FS Granted
EXNAM Primary Examiner: Brown, Johnnie R.
LREP Weiser & Stapler
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 415
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB 1,4 .alpha. disaccharides of formula: ##STR1## with Z representing a nitrogenous functional group,

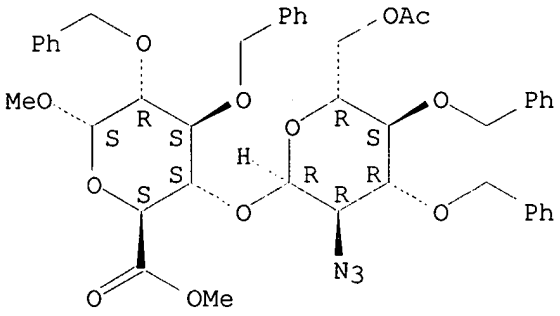
M hydrogen or a sulphate or acetyl group,

R an alkyl radical of 1 to 4 carbon atoms and

A a functional group such as an acid group, or a derivative.

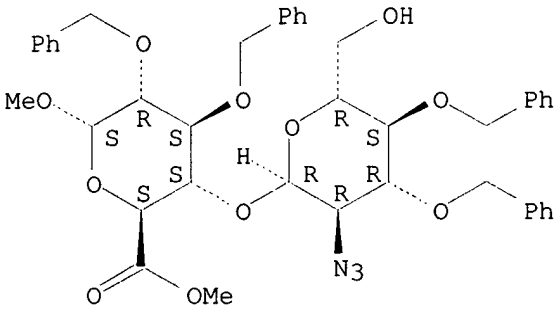
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **85750-89-6P**
(prepn. and deacetylation of)
RN 85750-89-6 USPATFULL
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **85743-92-6P**
(prepn. and sulfation of)
RN 85743-92-6 USPATFULL
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> fil hcaplus
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FILE LAST UPDATED: 18 Nov 2002 (20021118/ED)

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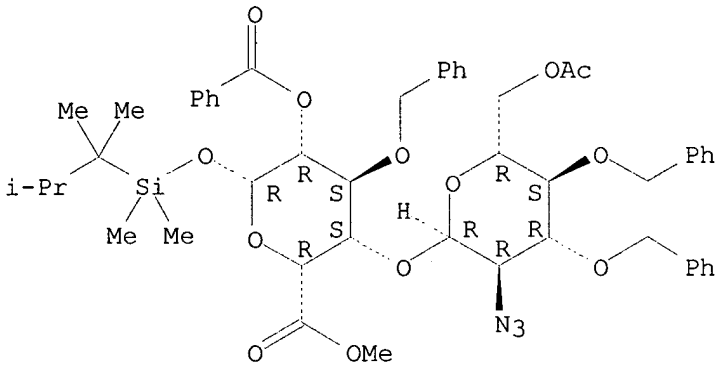
information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d l29 bib abs hitstr retable tot

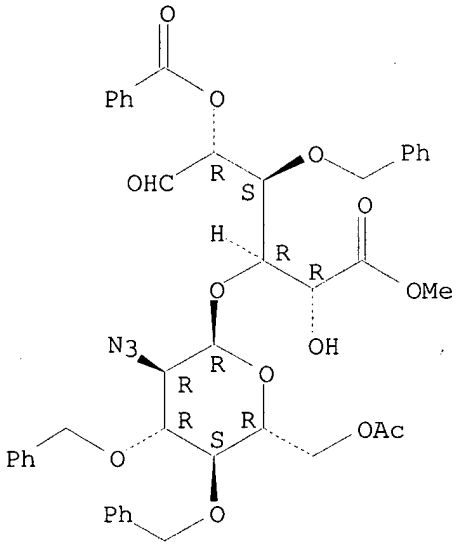
L29 ANSWER 1 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:688082 HCAPLUS
DN 136:53969
TI The activation of fibroblast growth factors by heparin: synthesis, structure, and biological activity of heparin-like oligosaccharides
AU De Paz, Jose-Luis; Angulo, Jesus; Lassaletta, Jose-Maria; Nieto, Pedro M.; Redondo-Horcajo, Mariano; Lozano, Rosa M.; Gimenez-Gallego, Guillermo; Martin-Lomas, Manuel
CS Grupo de Carbohidratos, Instituto de Investigaciones Quimicas, CSIC, Seville, 41092, Spain
SO ChemBioChem (**2001**), 2(9), 673-685
CODEN: CBCHFX; ISSN: 1439-4227
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB An effective strategy has been designed for the synthesis of oligosaccharides of different sizes structurally related to the regular region of heparin; this is illustrated by the prepn. of hexasaccharide 1 and octasaccharide 2. This synthetic strategy provides the oligosaccharide sequence contg. a D-glucosamine unit at the nonreducing end that is not available either by enzymic or chem. degrdn. of heparin. It may permit, after slight modifications, the prepn. of oligosaccharide fragments with different charge distribution as well. NMR spectroscopy and mol. dynamics simulations have shown that the overall structure of 1 in soln. is a stable right-hand helix with four residues per turn. Hexasaccharide 1 and, most likely, octasaccharide 2 are, therefore, chem. well-defined structural models of naturally occurring heparin-like oligosaccharides for use in binding and biol. activity studies. Both compds. 1 and 2 induce the mitogenic activity of acid fibroblast growth factor (FGF1), with the half-max. activating concn. of 2 being equiv. to that of heparin. Sedimentation equil. anal. with compd. 2 suggests that heparin-induced FGF1 dimerization is not an abs. requirement for biol. activity.
IT **382614-14-4P 382614-15-5P 382614-16-6P**
382614-22-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(activation of fibroblast growth factors by heparin synthesis structure and biol. activity of heparin-like oligosaccharides)
RN 382614-14-4 HCAPLUS
CN .beta.-L-Idopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-1-O-[dimethyl(1,1,2-trimethylpropyl)silyl]-3-O-(phenylmethyl)-, methyl ester, 2-benzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



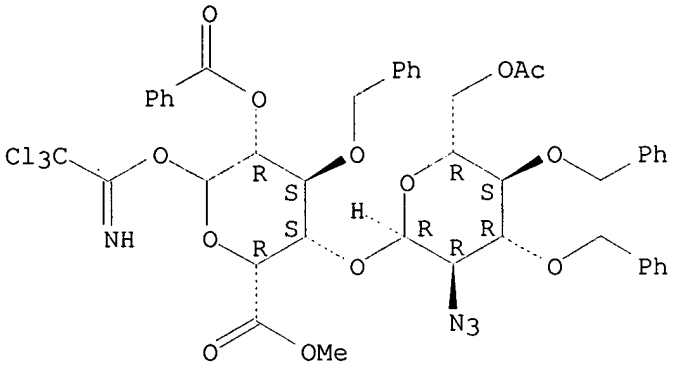
RN 382614-15-5 HCAPLUS
CN L-Iduronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-benzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



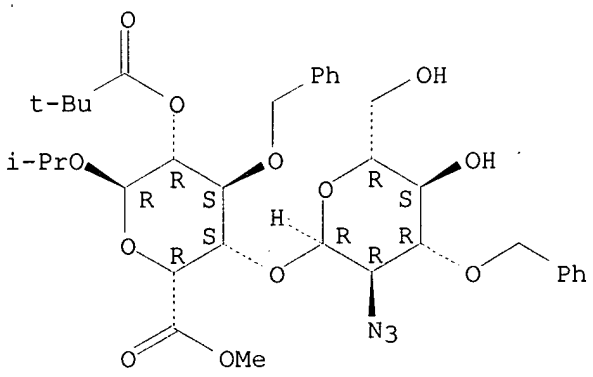
RN 382614-16-6 HCAPLUS
CN L-Idopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-benzoate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 382614-22-4 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, 1-methylethyl 4-O-[2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(2,2-dimethylpropanoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Altona, C	1995	16	56	J Comput Chem	
Avizer, D	1994	269	114	J Biol Chem	
Bax, A	1985	65	355	J Magn Reson	HCAPLUS
Case, D	1997			AMBER5	
Casu, B	1985	43	51	Adv Carbohydr Chem B	HCAPLUS
Casu, B	1986	322	215	Nature	HCAPLUS
Conrad, H	1998			Heparin-binding Prot	
Davis, A	1991	93	54	J Magn Reson	
de Paz, J	2000			PhD Thesis, Universi	
Digabriele, A	1998	393	812	Nature	HCAPLUS
Faham, S	1998	8	578	Curr Opin Struct Bio	HCAPLUS
Faham, S	1996	271	1116	Science	HCAPLUS
Ferro, D	1990	195	157	Carbohydr Res	HCAPLUS
Ferro, D	1986	108	6774	J Am Chem Soc	
Friesel, R	1995	9	919	FASEB J	HCAPLUS
Galzie, Z	1997	75	669	Biochem Cell Biol	HCAPLUS
Gambarini, A	1993	124	121	Mol Cell Biochem	HCAPLUS
Gimenez-Gallego, G	1986	135	541	Biochem Biophys Res	HCAPLUS
Hrikovini, M	1995	268	159	Carbohydr Res	
Ichikawa, I	1986	27	611	Tetrahedron Lett	
Ishihara, M	1993	268	4675	J Biol Chem	HCAPLUS

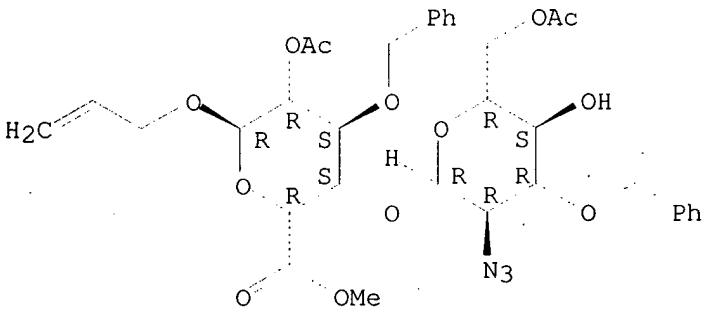
Jacquinet, J	1984	130	221	Carbohydr Res	HCAPLUS
Jeannerat, D	1999	141	133	J Magn Reson	HCAPLUS
Jeener, J	1979	71	4546	J Chem Phys	HCAPLUS
Juhasz, P	1995	270	131	Carbohydr Res	HCAPLUS
Kinzi, W	1985		1537	Liebigs Ann Chem	
Kovensky, J	1999	7	1567	Biorg Med Chem	HCAPLUS
Kovensky, J	1996	7	3119	Tetrahedron:Asymmetr	HCAPLUS
Kunz, H	1982		41	Liebigs Ann Chem	HCAPLUS
La Ferla, B	1999	55	9867	Tetrahedron	HCAPLUS
Lindahl, U	1989			Heparin	
Lozano, R	1997	248	30	Eur J Biochem	HCAPLUS
Lozano, R	1998	281	899	J Mol Biol	HCAPLUS
Lucas, H	1990	46	8207	Tetrahedron	HCAPLUS
Mach, H	1993	32	5480	Biochemistry	HCAPLUS
Marion, D	1983	113	286	Biochem Biophys Res	
Mason, I	1994	78	547	Cell	MEDLINE
McKeehan, W	1998	59	135	Prog Nucleic Acid Re	HCAPLUS
Mikhailov, D	1996	318	93	Biochem J	HCAPLUS
Mikhailov, D	1997	328	51	Biochem J	HCAPLUS
Mulloy, B	1993	298	849	Biochem J	
Ojeda, R	1999	8	1316	Synlett	
Ornitz, D	1992	12	240	Mol Cell Biol	MEDLINE
Ornitz, D	1995	268	432	Science	HCAPLUS
Ortega, S	1992	10	795	Bio/Technology	HCAPLUS
Pellegrini, L	2000	407	1029	Nature	HCAPLUS
Petitou, M	1991	1	95	Biorg Med Chem Lett	HCAPLUS
Petitou, M	1986	147	221	Carbohydr Res	HCAPLUS
Petitou, M	1988	179	163	Carbohydr Res	HCAPLUS
Pineda-Lucena, A	1994	242	81	J Mol Biol	HCAPLUS
Pineda-Lucena, A	1996	264	162	J Mol Biol	HCAPLUS
Plotnikov, A	1999	98	641	Cell	HCAPLUS
Romero, A	1996	241	453	Eur J Biochem	HCAPLUS
Schlessinger, J	2000	6	743	Mol Cell	HCAPLUS
Sinay, P	1984	132	C5	Carbohydr Res	HCAPLUS
Slavin, J	1995	19	431	Cell Biol Int	HCAPLUS
Spivak-Kroizman, T	1994	79	1015	Cell	HCAPLUS
Stauber, D	2000	97	49	Proc Natl Acad Sci U	HCAPLUS
Stringer, S	1997	29	709	Int J Biochem Cell B	HCAPLUS
Szebenyi, G	1999	185	45	Int Rev Cytol	HCAPLUS
Tabeur, C	1999	7	2003	Bioorg Med Chem	HCAPLUS
Tailler, D	1992		3163	J Chem Soc Perkin Tr	HCAPLUS
Taipale, J	1997	11	51	FASEB J	HCAPLUS
Torri, G	1985	128	134	Biochem Biophys Res	HCAPLUS
Ullrich, A	1990	61	203	Cell	HCAPLUS
van Boeckel, C	1993	105	1741	Angew Chem	HCAPLUS
van Boeckel, C	1993	32	1671	Angew Chem Int Ed En	
van Boekel, C	1985	4	293	J Carbohydr Chem	
Vasella, A	1991	74	2073	Helv Chim Acta	HCAPLUS
Venkataraman, G	1999	96	3658	Proc Natl Acad Sci U	HCAPLUS
Walker, A	1994	269	931	J Biol Chem	HCAPLUS
Wang, H	1997	235	369	Biochem Biophys Res	HCAPLUS
Wasman, G	1998	5	527	Nat Struct Biol	
Willker, W	1993	31	287	J Magn Reson	HCAPLUS
Woods, R	1995	99	3832	J Phys Chem	HCAPLUS
Zazo, M	1992	113	231	Gene	HCAPLUS
Zhou, F	1997	73	71	Eur J Cell Biol	HCAPLUS

L29 ANSWER 2 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:527055 HCAPLUS
DN 135:288993
TI A rational approach to heparin-related fragments - synthesis of differently sulfated tetrasaccharides as potential ligands for fibroblast growth factors

AU Poletti, Laura; Fleischer, Martin; Vogel, Christian; Guerrini, Marco; Torri, Giangiacomo; Lay, Luigi
CS Department of Organic and Industrial Chemistry, University of Milan, Milan, 20133, Italy
SO European Journal of Organic Chemistry (**2001**), (14), 2727-2734
CODEN: EJOCFK; ISSN: 1434-193X
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
OS CASREACT 135:288993
AB Heparin-like tetrasaccharides 1-3, differing in their sulfation pattern at position 6 of the glucosamine units, were synthesized. The three compds. are putative ligands for fibroblast growth factors and have the unusual sequence (GlcN-IdoA). They were obtained from two common disaccharide precursors by a versatile synthetic procedure.

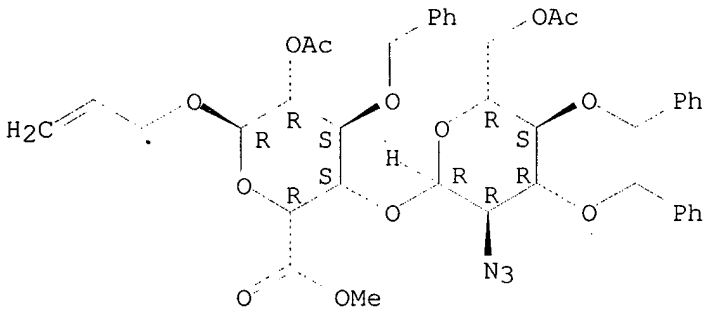
IT **364378-92-7P**
RL: BPN (Biosynthetic preparation); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis of heparin-related fragments sulfated tetrasaccharides as potential ligands for fibroblast growth factors)
RN 364378-92-7 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, 2-propenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



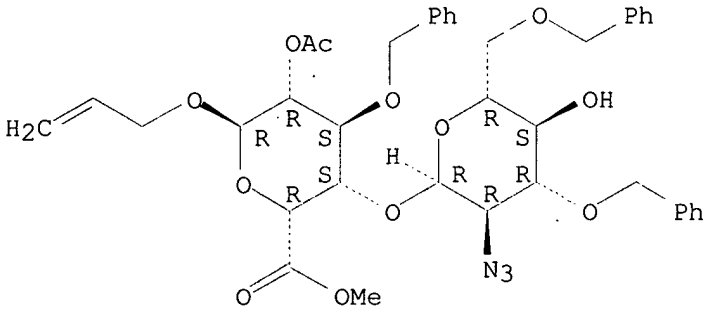
IT **245109-89-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of heparin-related fragments sulfated tetrasaccharides as potential ligands for fibroblast growth factors)
RN 245109-89-1 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, 2-propenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



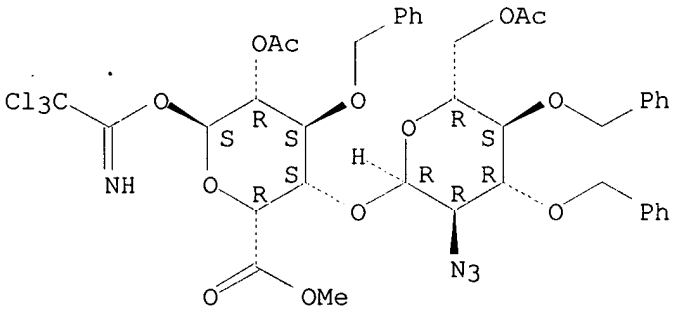
IT **364378-91-6P 364378-94-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of heparin-related fragments sulfated tetrasaccharides as potential ligands for fibroblast growth factors)
RN 364378-91-6 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, 2-propenyl 4-O-[2-azido-2-deoxy-3,6-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 364378-94-9 HCAPLUS
CN .alpha.-L-Idopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



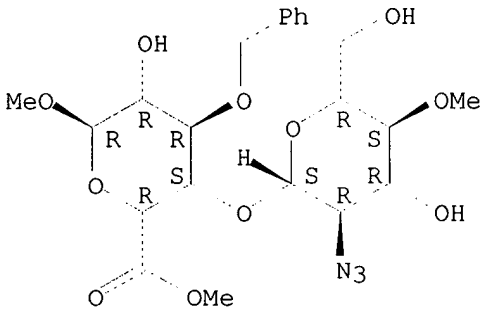
RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Burgess, W	1989	58	575	Annu Rev Biochem	HCAPLUS
Casu, B	1985	43	51	Adv Carbohydr Chem	HCAPLUS
Faham, S	1996	271	1116	Science	HCAPLUS
Guimond, S	1993	268	23906	J Biol Chem	HCAPLUS
Hileman, R	1998	20	156	BioEssays	MEDLINE
Jacquinet, J	1984	130	221	Carbohydr Res	HCAPLUS
Kjellen, L	1991	60	443	Annu Rev Biochem	HCAPLUS
Klagsburn, M	1990	2	857	Curr Opin Cell Biol	
La Ferla, B	1999	55	9867	Tetrahedron	HCAPLUS
Maccarana, M	1993	268	23898	J Biol Chem	HCAPLUS
Mach, H	1993	32	5480	Biochemistry	HCAPLUS
Nilsson, M	1993	246	161	Carbohydr Res	HCAPLUS
Oltvoort, J	1981		305	Synthesis	

Pellegrini, L	2000	107	1029	Nature
Schmidt, R	1986	25	212	Angew Chem Int Ed En

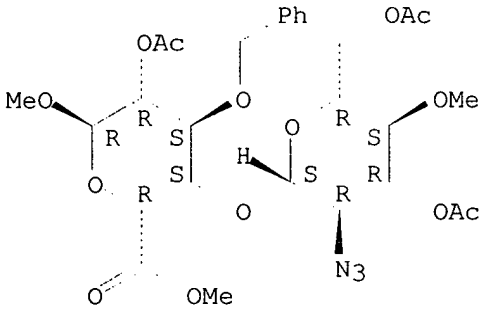
L29 ANSWER 3 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:737592 HCAPLUS
DN 132:122840
TI Synthesis of heparin partial structures and their binding activities to platelets
AU Koshida, Shuhei; Suda, Yasuo; Sobel, Michael; Ormsby, Julie; Kusumoto, Shoichi
CS Department of Chemistry, Graduate School of Science, Osaka University, Osaka, 560-0043, Japan
SO Bioorganic & Medicinal Chemistry Letters (**1999**), 9(21), 3127-3132
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier Science Ltd.
DT Journal
LA English
AB A synthetic pentasaccharide corresponding to the antithrombin III-binding region in heparin was also found to bind to human platelets. To identify the platelet-binding site in the pentasaccharide which is expected to be a novel sequence in heparin responsible for its platelet-binding, five partial structures of this particular pentasaccharide were synthesized. In a competitive assay using [3H]-heparin, a trisaccharide, O-(2-deoxy-2-sulfamido-3,6-di-O-sulfo-.alpha.-D-glucopyranosyl)-(1.fwdarw.4)-O-(2-O-sulfo-.alpha.-L-idopyranosyluronic acid)-(1.fwdarw.4)-2-deoxy-2-sulfamido-6-O-sulfo-.alpha.-D-glucopyranose, was concluded to be a high-affinity site for heparin's binding to platelets.
IT **256348-66-0P 256348-68-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of heparin partial structures and their binding activities to human platelets)
RN 256348-66-0 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, methyl 4-O-(2-azido-2-deoxy-4-O-methyl-.beta.-D-glucopyranosyl)-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 256348-68-2 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, methyl 4-O-(3,6-di-O-acetyl-2-azido-2-deoxy-4-O-methyl-.beta.-D-glucopyranosyl)-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



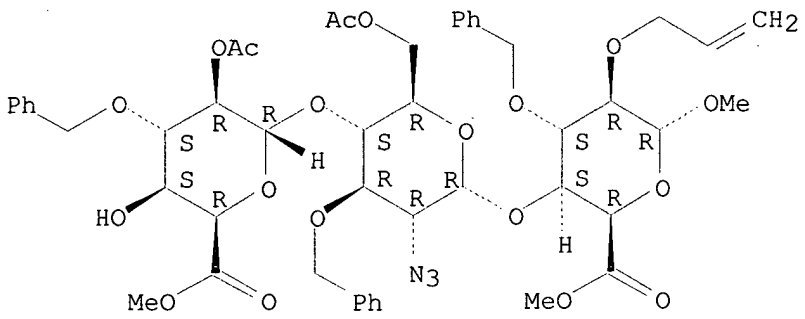
RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anelli, P	1987	52	2559	J Org Chem	
Anon	1989			Heparin	
Davis, N	1993	34	1181	Tetrahedron Lett	HCAPLUS
Hashimoto, N	1981	29	1475	Chem Pharm Bull	HCAPLUS
Isobe, M	1986	27	963	Tetrahedron Lett	HCAPLUS
Koshida, S	1999	40	5725	Tetrahedron Lett	HCAPLUS
Koshida, S	1998			XXth Japanese Carboh	
Kovensky, J	1996	7	3119	Tetrahedron: Asymmet	HCAPLUS
Petitou, M	1986	147	221	Carbohydr Res	HCAPLUS
Sobel, M	1992	5	1	Perspec Vasc Surg	
Suda, Y	1996	37	1053	Tetrahedron Lett	HCAPLUS
Suda, Y	1993	69	501	Throm Res	HCAPLUS
van Boeckel, C	1985	4	293	J Carbohydr Chem	HCAPLUS
Yamada, S	1998	10	95	Trends in Glycoscien	HCAPLUS

L29 ANSWER 4 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:571345 HCAPLUS
DN 131:299635
TI A synthetic heparan sulfate pentasaccharide, exclusively containing L-iduronic acid, displays higher affinity for FGF-2 than its D-glucuronic acid-containing isomers
AU Kovensky, Jose; Duchaussoy, Philippe; Bono, Francoise; Salmivirta, Markku; Sizun, Philippe; Herbert, Jean-Marc; Petitou, Maurice; Sinay, Pierre
CS Ecole Normale Superieure, Departement de Chimie, Associe au CNRS, Paris, 75231, Fr.
SO Bioorganic & Medicinal Chemistry (**1999**), 7(8), 1567-1580
CODEN: BMECEP; ISSN: 0968-0896
PB Elsevier Science Ltd.
DT Journal
LA English
AB It has been suggested that the FGF-2 binding site on heparan sulfate chains is a trisulfated pentasaccharide contg. three hexuronic acid units. The configuration at C-5 of two of them being undetd., we have synthesized the four possible pentasaccharides, and have evaluated their FGF-2 binding affinity through in vitro biol. assays. The pentasaccharide contg. L-iduronic acid as the sole hexuronic acid showed higher affinity for FGF-2 than the other pentasaccharides, where one hexuronic acid unit at least is D-glucuronic acid.
IT **181024-60-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of heparan sulfate pentasaccharides contg. L-iduronic acid which display higher affinity for FGF-2 than D-glucuronic acid-contg. isomers)
RN 181024-60-2 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, methyl O-2-O-acetyl-6-methyl-3-O-

(phenylmethyl)-.alpha.-L-idopyranuronosyl-(1.fwdarw.4)-O-6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-2-O-2-propenyl-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

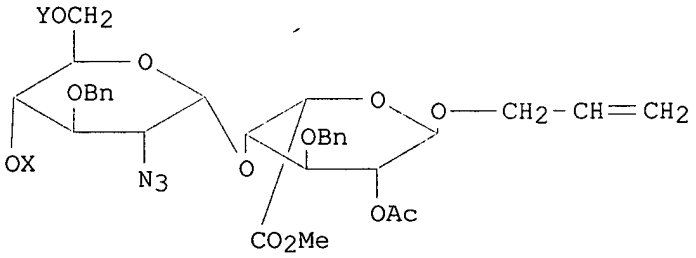


RETABLE

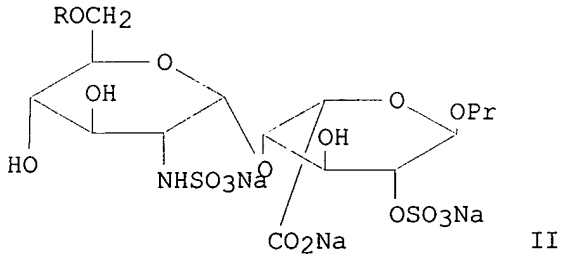
Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bono, F	1997	326	661	Biochem J	HCAPLUS
Casu, B	1988	13	221	Trends Biochem Sci	HCAPLUS
Faham, S	1996	271	1116	Science	HCAPLUS
Ferro, D	1990	195	157	Carbohydr Res	HCAPLUS
Ferro, D	1986	108	6773	J Am Chem Soc	HCAPLUS
Fischer, B	1984	49	4988	J Org Chem	HCAPLUS
Gallagher, J	1994	32	239	Eur J Clin Chem Clin	HCAPLUS
Guimond, S	1993	268	23906	J Biol Chem	HCAPLUS
Helferich, B	1953	86	604	Chem Ber	HCAPLUS
Herr, A	1997	272	16382	J Biol Chem	HCAPLUS
Jonsson, U	1991	11	620	Biotechniques	MEDLINE
Kessler, H	1986	70	106	J Magn Res	HCAPLUS
Koeners, H	1981	21	381	Tetrahedron Lett	
Konradsson, P	1990	31	4313	Tetrahedron Lett	HCAPLUS
Kovensky, J	1996	7	3119	Tetrahedron:Asymmetr	HCAPLUS
Maccarana, M	1993	268	23898	J Biol Chem	HCAPLUS
Mach, H	1993	32	5480	Biochemistry	HCAPLUS
Moy, F	1997	63	4782	Biochemistry	
Oltvoort, J	1981	305		Synthesis	
Ornitz, D	1995	268	432	Science	HCAPLUS
Pavel, K				NMR-Sim version 2.6.	
Pedretti, V	1993	244	247	Carbohydr Res	HCAPLUS
Petitou, M	1986	147	221	Carbohydr Res	HCAPLUS
Sakai, K	1990	31	3035	Tetrahedron Lett	HCAPLUS
Schmidt, R	1984	1342		Liebigs Ann Chem	
Schmidt, R	1984	25	821	Tetrahedron Lett	HCAPLUS
Tabeur, C	1996	281	253	Carbohydr Res	HCAPLUS
Turnbull, J	1992	267	10337	J Biol Chem	HCAPLUS
Veeneman, G	1990	31	1331	Tetrahedron Lett	HCAPLUS
Walker, A	1994	269	931	J Biol Chem	HCAPLUS
Yayon, A	1991	64	841	Cell	HCAPLUS

L29 ANSWER 5 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:512080 HCAPLUS
DN 131:257764
TI Synthesis of disaccharidic sub-units of a new series of heparin related oligosaccharides
AU La Ferla, Barbara; Lay, Luigi; Guerrini, Marco; Poletti, Laura; Panza, Luigi; Russo, Giovanni
CS Universita degli Studi di Milano, Dipartimento di Chimica Organica e

Industriale, Centro di Studio sulle Sostanze Organiche Naturali del CNR, Milan, 21-20133, Italy
SO Tetrahedron (**1999**), 55(32), 9867-9880
CODEN: TETRAB; ISSN: 0040-4020
PB Elsevier Science Ltd.
DT Journal
LA English
GI



I



II

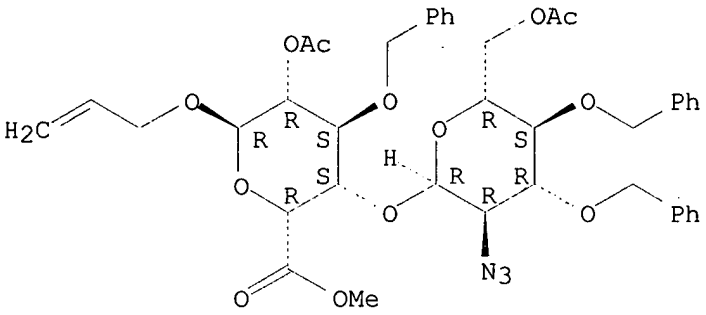
AB The chem. synthesis of disaccharides I (X = Bn, Y = Ac; X,Y = CHPh), useful building-blocks for the prepn. of a new series of heparin related oligosaccharides contg. the unusual sequence (GlcN-IdoA)n, is described. In addn., the orthogonality of the protective groups would allow access to a wide array of differently sulfated oligosaccharides. As the simplest members of this new class of oligomer, the synthesis of sulfated disaccharides II (R = SO3Na, H) fully deprotected is reported.

IT **245109-89-1P 245110-04-7P 245110-06-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of disaccharidic sub-units of a new series of heparin related oligosaccharides)

RN 245109-89-1 HCAPLUS

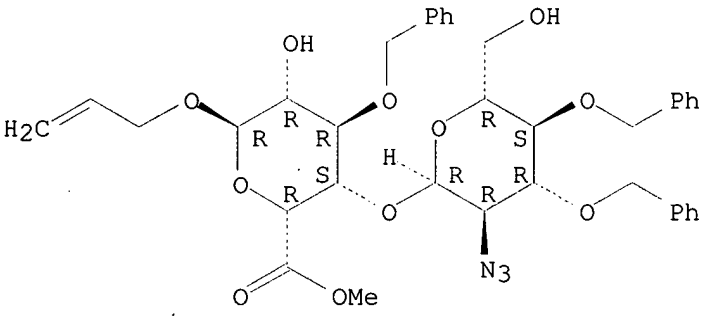
CN .alpha.-L-Idopyranosiduronic acid, 2-propenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



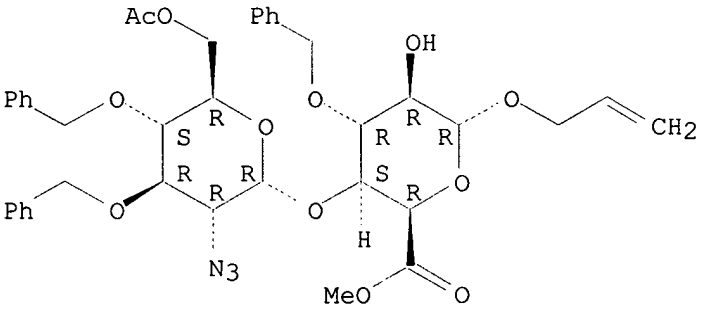
RN 245110-04-7 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, 2-propenyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 245110-06-9 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, 2-propenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



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Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Alper, P	1996	37	6029	Tetrahedron Lett	HCAPLUS
Burgess, W	1989	58	575	Annu Rev Biochem	HCAPLUS
Casu, B	1985	43	51	Adv Carbohydr Chem	HCAPLUS
Caveander, C	1972	37	3567	J Org Chem	
Eisele, T	1995		2113	Liebigs Ann Chem	HCAPLUS

Guimond, S	1993	268	23906	J Biol Chem	HCAPLUS
Kjellen, L	1991	60	443	Annu Rev Biochem	HCAPLUS
Klagsbrun, M	1990	2	857	Curr Opin Cell Biol	HCAPLUS
Lindahl, U	1984	259	12368	J Biol Chem	HCAPLUS
Maccarana, M	1993	268	23898	J Biol Chem	HCAPLUS
van Boeckel, C	1985	4	293	J Carbohydr Chem	HCAPLUS
Yang, G	1997	38	6725	Tetrahedron Lett	HCAPLUS

L29 ANSWER 6 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:476747 HCAPLUS
DN 131:199923
TI Synthesis and biological activity of oligomer-model compounds containing units of a key platelet-binding disaccharide of heparin
AU Koshida, Shuhei; Suda, Yasuo; Fukui, Yasuhiro; Ormsby, Julie; Sobel, Michael; Kusumoto, Shoichi
CS Department of Chemistry, Graduate School of Science, Osaka University, Osaka, 560-0043, Japan
SO Tetrahedron Letters (**1999**), 40(31), 5725-5728
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
AB A key disaccharide unit in heparin, O-(2-deoxy-2-sulfamido-6-O-sulfo-.alpha.-D-glucopyranosyl)-(1.fwdarw.4)-2-O-sulfo-.alpha.-L-idopyranosyluronic acid, was previously found to be responsible for the binding interaction of heparin to platelets. A clustering effect to enhance the binding was found to be dependent on the no. and frequency of the disaccharide units in a heparin mol. To systematically examine the clustering effect, three oligomer-model compds. contg. two or three units of the disaccharide were synthesized. These compds. inhibited 3H-labeled heparin binding to human platelets more strongly than a compd. contg. only one unit of the disaccharide.
IT **241129-74-8P 241129-76-0P 241129-80-6P**
241129-85-1P 241129-86-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and biol. activity of oligomer-model compds. contg. units of a key platelet-binding disaccharide of heparin)
RN 241129-74-8 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-4-O-2-propenyl-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 241129-76-0 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, 4',4'''-O-[1,2-ethanediylbis[imino(2-oxo-2,1-ethanediyl)]]bis[methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, dimethyl ester, 2,2''-diacetate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 241129-80-6 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, 2-aminoethyl 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-methyl-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 241129-85-1 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-(2-oxoethyl)-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

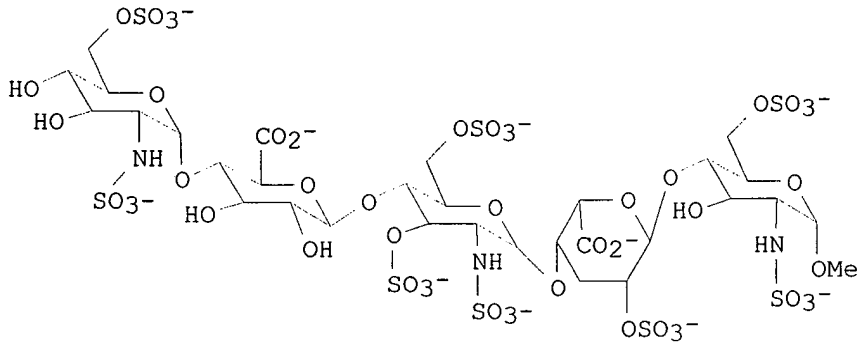
RN 241129-86-2 HCAPLUS
CN ..alpha.-L-Idopyranosiduronic acid, 2-[[(9H-fluoren-9-ylmethoxy)carbonyl]amino]ethyl 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-methyl-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Carlson, L	1965	30	3953	J Org Chem	HCAPLUS
Chen, S	1991	32	6711	Tetrahedron Lett	HCAPLUS
Davis, N	1993	34	1181	Tetrahedron Lett	HCAPLUS
Kovensky, J	1996	7	3119	Tetrahedron: Asymmet	HCAPLUS
Suda, Y	1996	37	151	Polymer Preprints	HCAPLUS
Suda, Y	1996	37	1053	Tetrahedron Lett	HCAPLUS
Suda, Y	1993	69	501	Throm Res	HCAPLUS
van Boeckel, C	1985	4	293	J Carbohydr Chem	HCAPLUS

L29 ANSWER 7 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:617886 HCAPLUS
DN 129:316478
TI Synthesis of a 3-deoxy-L-iduronic acid containing heparin pentasaccharide to probe the conformation of antithrombin III binding sequence
AU Lei, Ping-Sheng; Duchaussoy, Philippe; Sizun, Philippe; Mallet, Jean-Maurice; Petitou, Maurice; Sinay, Pierre
CS Ecole Normale Superieure, Department de Chimie, URA CNRS 1686, 24 Rue Lhomond, Paris, 75231, Fr.
SO Bioorganic & Medicinal Chemistry (**1998**), 6(8), 1337-1346
CODEN: BMECEP; ISSN: 0968-0896
PB Elsevier Science Ltd.
DT Journal
LA English
GI

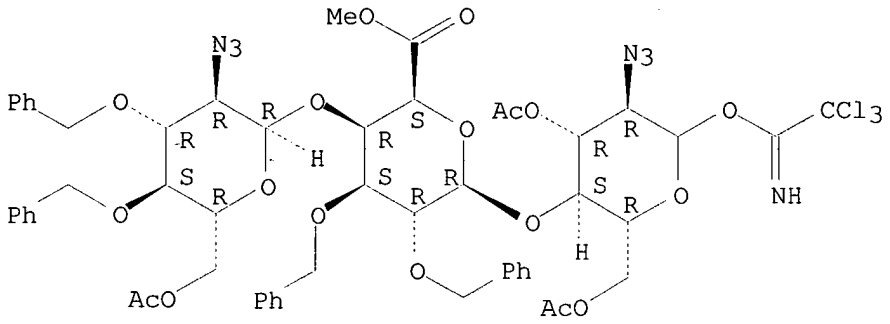


I

AB We report in this work the total synthesis of a close analog I of the pentasaccharide active site of heparin , in which the L-iduronic acid residue has been deoxygenated at position three. 1H NMR studies demonstrated that, as anticipated, such a modification induces a shift of the conformational equil. toward 1C4 (contribution to the conformational equil. rises from 37% to 65%) and a substantial decrease of the affinity for antithrombin III (Kd 0.154 .mu.M vs. 0.050 .mu.M).
IT **214767-67-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of 3-deoxy-L-iduronic acid contg. heparin pentasaccharide to

probe the conformation of antithrombin III binding sequence)
RN 214767-67-6 HCAPLUS
CN D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-galactopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



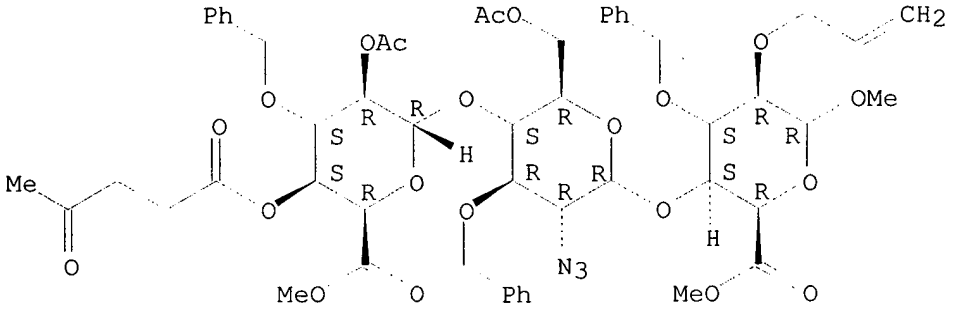
RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Angyal, S	1972	25	1695	Austr J Chem	HCAPLUS
Angyal, S	1972		1711	Austr J Chem	HCAPLUS
Atha, D	1987	26	6454	Biochemistry	HCAPLUS
Binkley, R	1978	43	3244	J Org Chem	HCAPLUS
Bodenhausen, G	1984	58	370	J Magn Reson	HCAPLUS
Carlsen, H	1981	46	3936	J Org Chem	
Casu, B	1985	13	51	Adv Carbo Chem Bioch	
Casu, B	1986	322	215	Nature (London)	HCAPLUS
Cerny, M	1955	49	1848	Chem Listy	HCAPLUS
Choay, J	1981	370	644	Ann N Y Acad Sci	HCAPLUS
Choay, J	1983	116	492	Biochem Biophys Res	HCAPLUS
Ferro, D	1990	195	157	Carbo Res	HCAPLUS
Ferro, D	1986	108	6773	J Am Chem Soc	HCAPLUS
Gallagher, T	1893	116	227	Carbo Res	
Garegg, P	1980		2866	J Chem Soc Perkin I	HCAPLUS
Gillard, F	1988		2291	J Chem Soc Perkin I	HCAPLUS
Greene, T	1991		60	Protective Groups in	
Hedgley, E	1963		4701	J Chem Soc	HCAPLUS
Jacquinet, J	1984	130	221	Carbo Res	HCAPLUS
Kovac, P	1985	4	243	J Carbo Chem	HCAPLUS
Kunz, H	1979	20	2123	Tetrahedron Lett	
Lei, P	1994		378	Abstr XVIIth Int Car	
Marion, D	1983	113	967	Biochem Biophys Res	HCAPLUS
Olson, S	1992	267	12528	J Biol Chem	HCAPLUS
Petitou, M	1991	1	95	Bioorg Med Chem Lett	HCAPLUS
Petitou, M	1986	147	221	Carbo Res	HCAPLUS
Petitou, M	1987	167	67	Carbo Res	HCAPLUS
Petitou, M	1988	179	163	Carbo Res	HCAPLUS
Petrakova, E	1996	284	191	Carbo Res	HCAPLUS
Ragazzi, M	1990	195	169	Carbo Res	HCAPLUS
Rosenberg, R	1973	248	6490	J Biol Chem	HCAPLUS
Sakairi, N	1996	2	1007	Chem Eur J	
Sakairi, N	1982	23	5327	Tetrahedron Lett	HCAPLUS
Sato, K	1988		1703	Chem Lett	HCAPLUS
Schuda, P	1983	24	3829	Tetrahedron Lett	HCAPLUS
Sinay, P	1984	132	C5	Carbo Res	HCAPLUS
Thunberg, L	1982	100	393	Carbo Res	HCAPLUS

Torri, G	1985	128	134	Biochem Biophys Res	HCAPLUS
van Boeckel, C	1993	32	1671	Angew Chem Int Ed En	
van Boeckel, C	1985	4	293	J Carbo Chem	HCAPLUS
van Boeckel, C	1988	29	803	Tetrahedron Lett	HCAPLUS

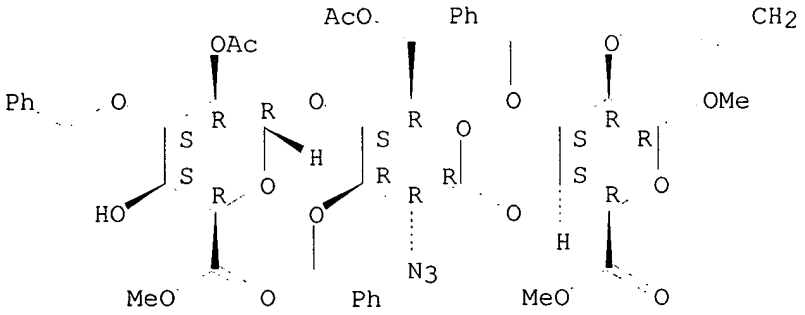
L29 ANSWER 8 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:734594 HCAPLUS
DN 126:89678
TI Binding of heparan sulfate to fibroblast growth factor-2. Total preparation of a putative pentasaccharide binding site
AU Kovensky, Jose; Duchaussoy, Philippe; Petitou, Maurice; Sinay, Pierre
CS Dep. Chim., Ecole Normale Super., Paris, 75231, Fr.
SO Tetrahedron: Asymmetry (**1996**), 7(11), 3119-3128
CODEN: TASYE3; ISSN: 0957-4166
PB Elsevier
DT Journal
LA English
AB The total chem. prepn. of the pentasaccharide Me O-(.alpha.-L-idopyranosyluronic acid)-(1.fwdarw.4)-O-(2-deoxy-2-sulfamido-.alpha.-D--glucopyranosyl)-(1.fwdarw.4)-O-(.alpha.-L-idopyranosyluronic acid)-(1.fwdarw.4)-O-(2-deoxy-2-sulfamido-.alpha.-D--glycopyranosyl)-(1.fwdarw.4)-2-O-sulfo-.alpha.-L-idopyranosiduronic acid is reported. This sequence is a possible candidate for binding to basic fibroblast growth factor (FGF-2).
IT **181024-59-9P 181024-60-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(total prepn. of uronate-contg. pentasaccharide as binding site for fibroblast growth factor-2)
RN 181024-59-9 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, methyl O-2-O-acetyl-4-O-(1,4-dioxopentyl)-6-methyl-3-O-(phenylmethyl)-.alpha.-L-idopyranuronosyl-(1.fwdarw.4)-O-6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-2-O-2-propenyl-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



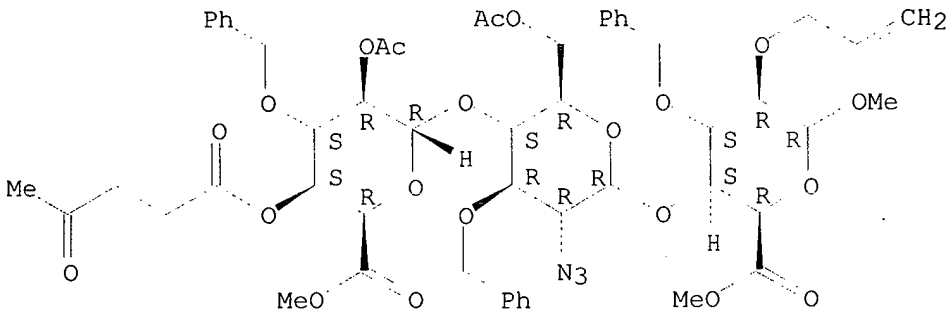
RN 181024-60-2 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, methyl O-2-O-acetyl-6-methyl-3-O-(phenylmethyl)-.alpha.-L-idopyranuronosyl-(1.fwdarw.4)-O-6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-2-O-2-propenyl-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L29 ANSWER 9 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:412705 HCAPLUS
DN 125:222302
TI Total synthesis of a pentasaccharide sequence in heparin/heparan sulfate required for binding of basic fibroblast growth factor
AU Kovensky, Jose; Duchaussoy, Philippe; Petitou, Maurice; Sinay, Pierre
CS Dep. Chimie, Ecole Normale Superieure, Paris, 75231, Fr.
SO Carbohydrate Letters (**1996**), 2(1), 73-78
CODEN: CLETEC; ISSN: 1073-5070
PB Harwood
DT Journal
LA English
AB This letter reports the total chem. synthesis of the hexasodium salt of the pentasaccharide Me O-(.alpha.-L-idopyranosyluronic acid)-(1.fwdarw.4)-O-(2-deoxy-2-sulfamido-.alpha.-D-glucopyranosyl)-(1.fwdarw.4)-O-(.alpha.-L-idopyranosyluronic acid)-(1.fwdarw.4)-O-(2-deoxy-2-sulfamido-.alpha.-D-glucopyranosyl)-(1.fwdarw.4)-2-O-sulfo-.alpha.-L-idopyranosid uronic acid, a proposed candidate for binding of basic fibroblast growth factor (FGF-2).
IT **181024-59-9P 181024-60-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(total synthesis of a pentasaccharide sequence in heparin/heparan sulfate required for binding of basic fibroblast growth factor)
RN 181024-59-9 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, methyl O-2-O-acetyl-4-O-(1,4-dioxopentyl)-6-methyl-3-O-(phenylmethyl)-.alpha.-L-idopyranuronosyl-(1.fwdarw.4)-O-6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-2-O-2-propenyl-, methyl ester (9CI) (CA INDEX NAME)

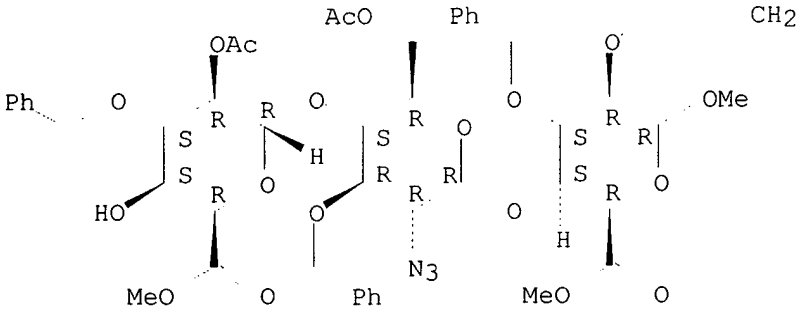
Absolute stereochemistry. Rotation (-).



RN 181024-60-2 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, methyl O-2-O-acetyl-6-methyl-3-O-

(phenylmethyl)-.alpha.-L-idopyranuronosyl-(1.fwdarw.4)-O-6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-2-O-2-propenyl-, methyl ester (9CI) (CA INDEX NAME)

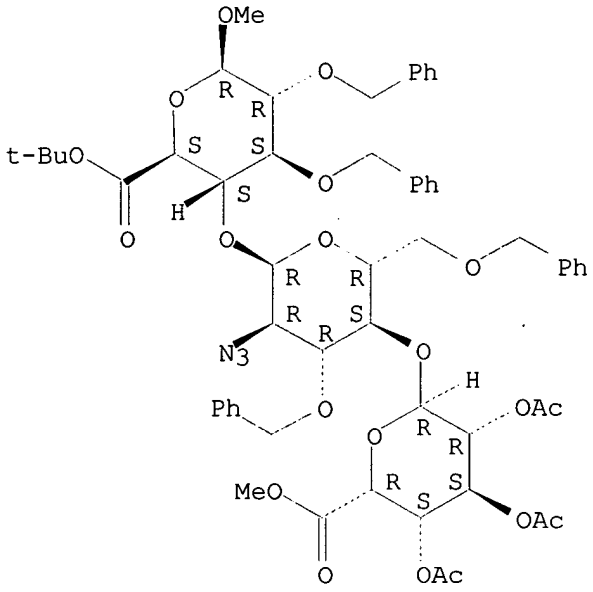
Absolute stereochemistry. Rotation (-).



L29 ANSWER 10 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:349989 HCAPLUS
DN 122:265852
TI Synthesis and fibroblast growth factor binding of oligosaccharides related to heparin and heparin sulfate
AU Westman, Jacob; Nilsson, Marianne; Ornitz, David M.; Svahn, Carl-Magnus
CS Organic Chemistry, Kabi Pharmacia AB, Stockholm, S-112 87, Swed.
SO Journal of Carbohydrate Chemistry (**1995**), 14(1), 95-113
CODEN: JCACDM; ISSN: 0732-8303
PB Dekker
DT Journal
LA English
AB A series of six disaccharides, .alpha.-L-iodoA-(1.fwdarw.4)-.alpha.-D-GlcNAc-1.fwdarw.OMe, .alpha.-L-IodoA-(1.fwdarw.4)-.alpha.-D-GlcNSO3-1.fwdarw.OMe, .beta.-D-GlcA-(1.fwdarw.4)-.alpha.-D-GlcNAc-1.fwdarw.OMe, .beta.-D-GlcA-(1.fwdarw.4)-.alpha.-D-GlcNSO3-1.fwdarw.OMe, .alpha.-D-GlcNAc-(1.fwdarw.4)-.beta.-D-GlcA-1.fwdarw.OMe, .beta.-D-GlcNAc-(1.fwdarw.4)-.beta.-D-GlcA-1.fwdarw.OMe, and two trisaccharide, .beta.-D-GlcA-(1.fwdarw.4)-.alpha.-D-GlcNAc-(1.fwdarw.4)-.beta.-D-GlcA-1.fwdarw.OMe, .alpha.-L-IodA-(1.fwdarw.4)-.alpha.-D-GlcNSO3-(1.fwdarw.4)-.beta.-D-GlcA-1.fwdarw.OMe was prepd. and screened for biol. activity in vitro. The oligosaccharides were tested, together with a previously synthesized trisaccharide, .alpha.-L-IodaA-(1.fwdarw.4)-.alpha.-D-GlcNAc-(1.fwdarw.4)-.beta.-D-GlcA-1.fwdarw.OMe, and three tetrasaccharides, .alpha.-L-IodA-(1.fwdarw.4)-.alpha.-D-GlcNAc-(1.fwdarw.4)-.beta.-D-GlcA-(1.fwdarw.3)-.beta.-D-Gal-1.fwdarw.OMe, .beta.-D-GlcA-(1.fwdarw.3)-.beta.-D-Gal-(1.fwdarw.3)-.beta.-D-Gal-(1.fwdarw.3)-2-PO3-.beta.-D-Xyl-1.fwdarw.OMe, .beta.-D-GlcA-(1.fwdarw.3)-.beta.-D-Gal-(1.fwdarw.3)-.beta.-D-Gal-(1.fwdarw.3)-.beta.-D-Xyl-1.fwdarw.OMe, for competitive binding to acidic and basic fibroblast growth factor in an assay using 125I labeled heparin. It was found that the non-sulfated trisaccharides, .alpha.-L-IodA-(1.fwdarw.4)-.alpha.-D-GlcNAc-(1.fwdarw.4)-.beta.-D-GlcA-1.fwdarw.OMe and .beta.-D-GlcA-(1.fwdarw.4)-.alpha.-D-GlcNAc-(1.fwdarw.4)-.beta.-D-GlcA-1.fwdarw.OMe, and two of the disaccharides can bind to acidic as well as basic FGF.
IT **151992-81-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and fibroblast growth factor binding of oligosaccharides related to heparin and heparin sulfate)
RN 151992-81-3 HCAPLUS
CN .beta.-D-Glucopyranosiduronic acid, methyl O-2,3,4-tri-O-acetyl-6-methyl-.alpha.-L-idopyranuronosyl-(1.fwdarw.4)-O-2-azido-2-deoxy-3,6-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-2,3-bis-O-

(phenylmethyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

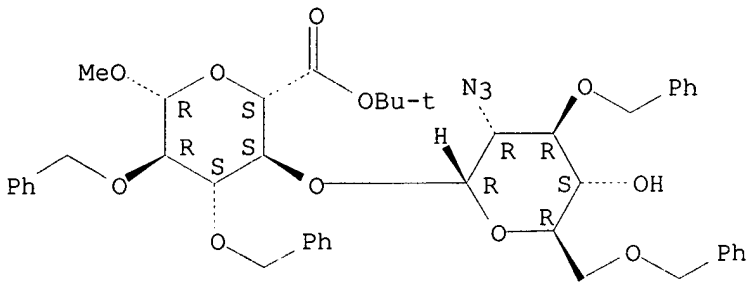


IT **162552-85-4P 162552-86-5P 162552-89-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and fibroblast growth factor binding of oligosaccharides related to heparin and heparin sulfate)

RN 162552-85-4 HCAPLUS

CN .beta.-D-Glucopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,6-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

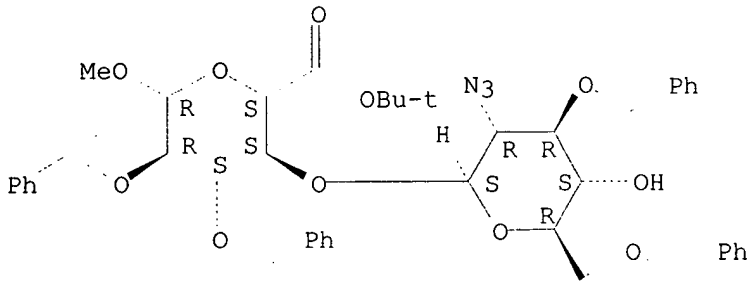
Absolute stereochemistry. Rotation (+).



RN 162552-86-5 HCAPLUS

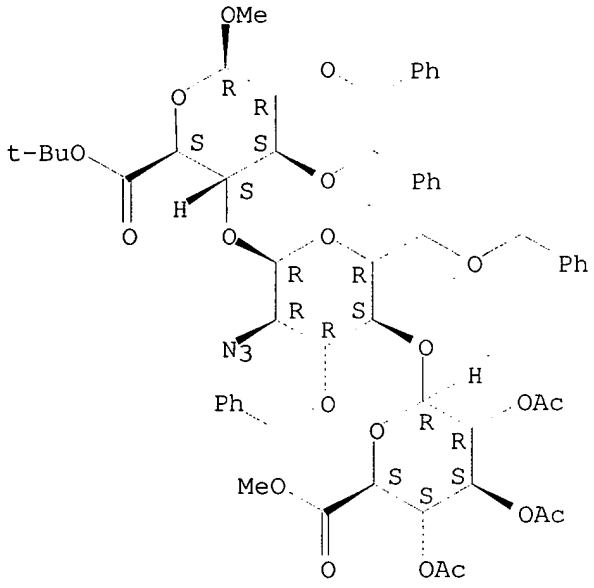
CN .beta.-D-Glucopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,6-bis-O-(phenylmethyl)-.beta.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

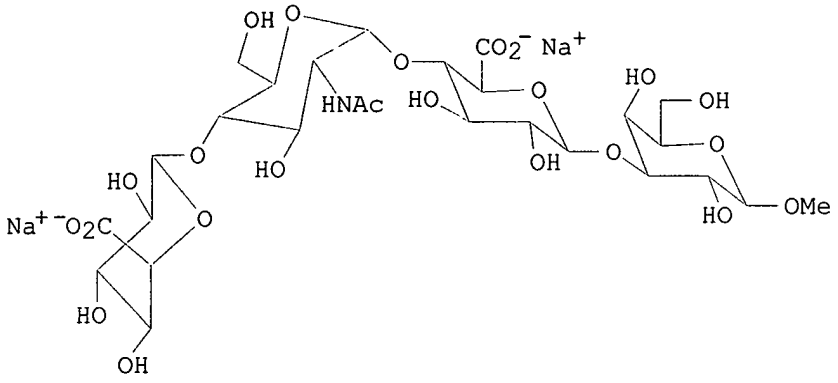


RN 162552-89-8 HCAPLUS
CN .beta.-D-Glucopyranosiduronic acid, methyl O-2,3,4-tri-O-acetyl-6-methyl-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-O-2-azido-2-deoxy-3,6-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-2,3-bis-O-(phenylmethyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L29 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1994:54861 HCAPLUS
DN 120:54861
TI Synthesis of the methyl glycosides of a tri- and a tetra-saccharide related to heparin and heparan sulfate
AU Nilsson, Marianne; Svahn, Carl Magnus; Westman, Jacob
CS Kabi Pharm., Stockholm, S-112 87, Swed.
SO Carbohydrate Research (**1993**), 246, 161-72
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English
GI



I

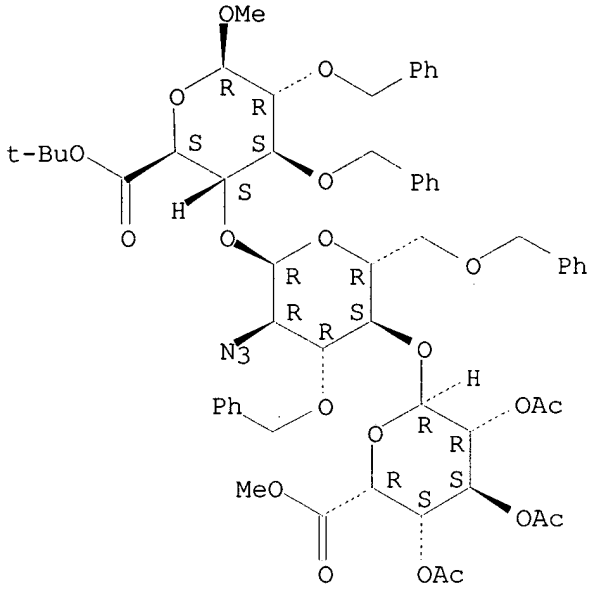
AB The Me glycoside of a tetrasaccharide isolated from heparin, Me O-(.alpha.-L-idopyranosyluronic acid)-(1.fwdarw.4)-O-(2-acetamido-2-deoxy-.alpha.-D-glucopyranosyl)-(1.fwdarw.4)-O-(.beta.-D-glucopyranosyluronic acid)-(1.fwdarw.3)-O-.beta.-D-galactopyranoside disodium salt and a trisaccharide deriv. thereof, Me O-(.alpha.-L-idopyranosyluronic acid)-(1.fwdarw.4)-O-(2-acetamido-2-deoxy-.alpha.-D-glucopyranosyl)-(1.fwdarw.4)-O-.beta.-D-glucopyranosyluronic acid disodium salt, were synthesized using a block-type strategy. A suitable protected disaccharide block of iduronic acid and glucosamine (IdoA-GlcN) was used as a key intermediate for the syntheses and was glycosylated with a protected galactose deriv. and a disaccharide block of glucuronic acid and galactose (GlcA-Gal) to give tri- and tetra-saccharide derivs., resp. Deprotection gave the target compds., e.g. I.

IT **151992-81-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. as intermediate in prepn. of oligosaccharide related to heparin and heparan sulfate)

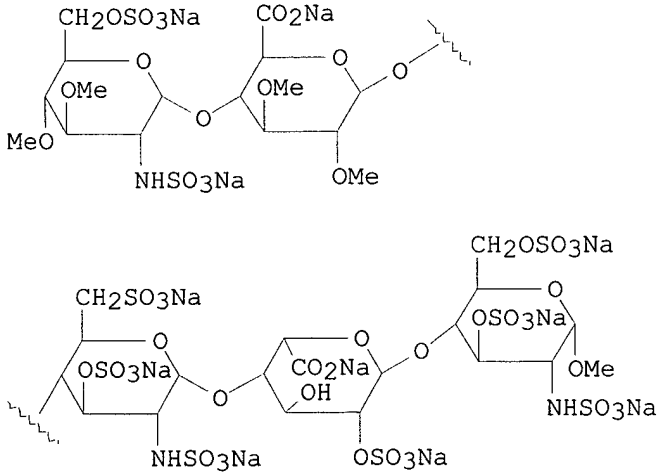
RN 151992-81-3 HCAPLUS

CN .beta.-D-Glucopyranosiduronic acid, methyl O-2,3,4-tri-O-acetyl-6-methyl-.alpha.-L-idopyranuronosyl-(1.fwdarw.4)-O-2-azido-2-deoxy-3,6-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-2,3-bis-O-(phenylmethyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1993:581119 HCAPLUS
DN 119:181119
TI Biologically active herparin-like fragments with a "non-glycosaminio" glycan structure. Part 2: A tetra-O-methylated pentasaccharide with high affinity for antithrombin III
AU Basten, J.; Jaurand, G.; Olde-Hanter, B.; Petitou, M.; van Boeckel, C. A. A.
CS Organon Int. B.V., Oss., 5340 BH, Neth.
SO Bioorganic & Medicinal Chemistry Letters (**1992**), 2(9), 901-4
CODEN: BMCLE8; ISSN: 0960-894X
DT Journal
LA English
GI



I

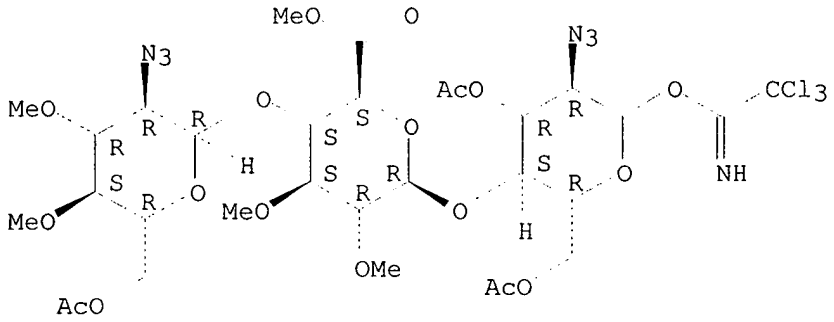
AB Heparin-like fragment tetra-O-methylated pentasaccharide I was prepd. in 14 steps using glycosidation reactions with high affinity for antithrombin III.

IT **150126-08-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 150126-08-2 HCAPLUS

CN D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-di-O-methyl-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-di-O-methyl-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 13 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1993:581118 HCAPLUS

DN 119:181118

TI Biologically active heparin-like fragments with a "non-glycosamino" glycan structure. Part 1: A pentasaccharide containing a 3-O-methyl iduronic acid unit

AU Jaurand, G.; Basten, J.; Lederman, I; van Boeckel, C. A .A.; Petitou, M.

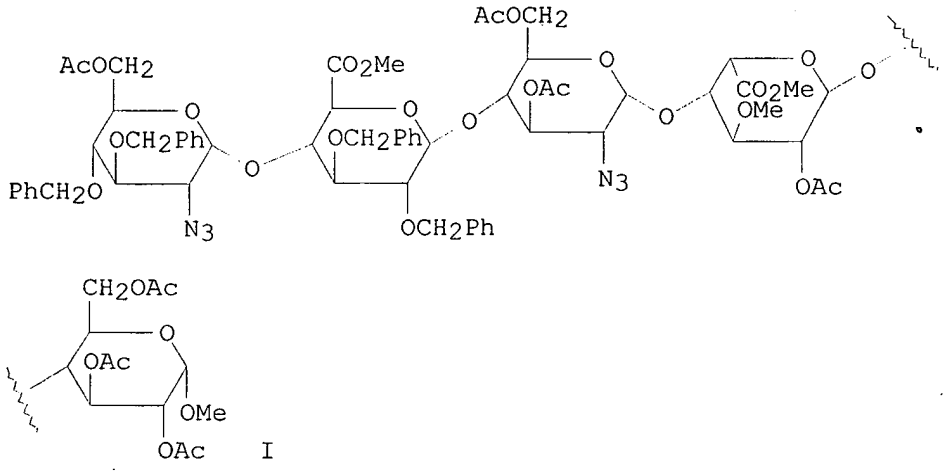
CS Sanofi Recher., Gentilly, 94256, Fr.

SO Bioorganic & Medicinal Chemistry Letters (**1992**), 2(9), 897-900
CODEN: BMCLE8; ISSN: 0960-894X

DT Journal

LA English

GI



I

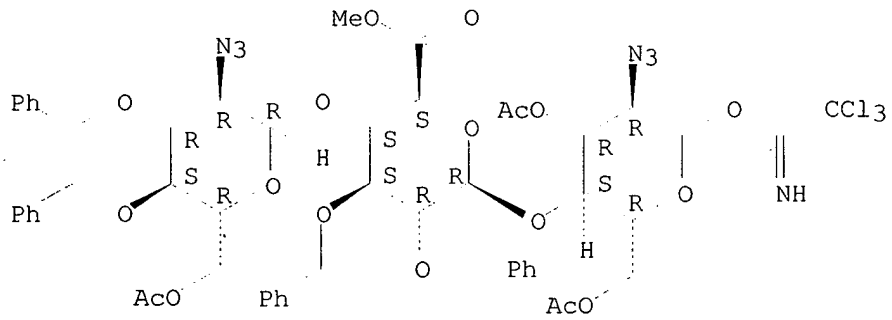
AB Heparin-like fragment pentasaccharide I was prepd. via glycosidation reaction as antithrombotic agent. The introduction of a Me group at the 3 position of L-iduronic acid residue neither affects the AT III mediated anti-factor Xa activity nor alter the conformational properties of a unique heparin pentasaccharide sequence.

IT **150284-29-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling of, with disaccharide)

RN 150284-29-0 HCAPLUS

CN D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 14 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1991:492770 HCAPLUS

DN 115:92770

TI A new, highly potent, heparin-like pentasaccharide fragment containing a glucose residue instead of a glucosamine

AU Petitou, M.; Jaurand, G.; Derrien, M.; Duchaussoy, P.; Choay, J.

CS Cent. Choay, Sanofi Rech., Gentilly, 94256, Fr.

SO Bioorganic & Medicinal Chemistry Letters (**1991**), 1(2), 95-8
CODEN: BMCLE8; ISSN: 0960-894X

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

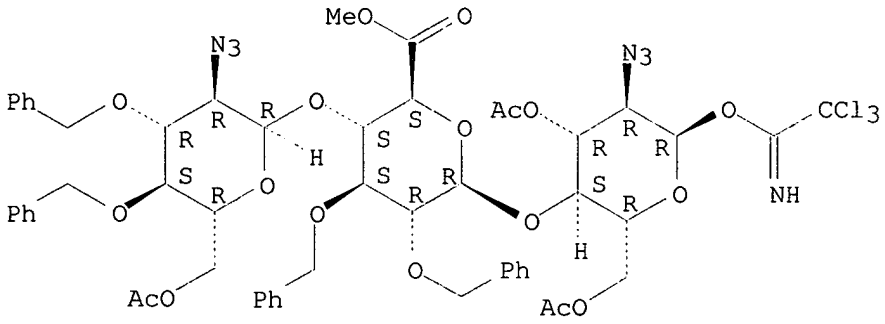
AB A new heparin-like pentasaccharide fragment (I) in which the reducing end glucosamine unit is replaced by a glucose residue was prepd. This indicates that an O-sulfate can be substituted for an N-sulfate thereby allowing simpler synthesis of this kind of compd. A new route using a trisaccharide II as glycosyl donor was developed for this prepn.

IT **135362-95-7P 135362-96-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and coupling of, with disaccharide)

RN 135362-95-7 HCAPLUS

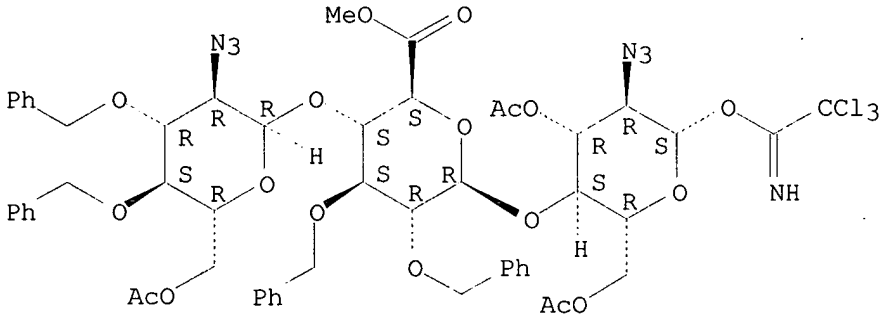
CN .alpha.-D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



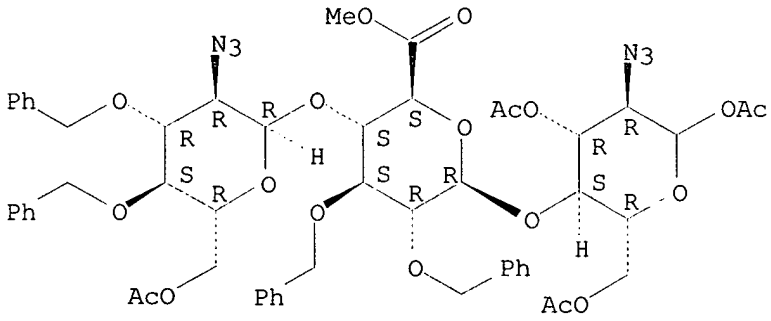
RN 135362-96-8 HCAPLUS
CN .beta.-D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **99541-28-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deacetylation of)
RN 99541-28-3 HCAPLUS
CN D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 1,3,6-triacetate (9CI) (CA INDEX NAME)

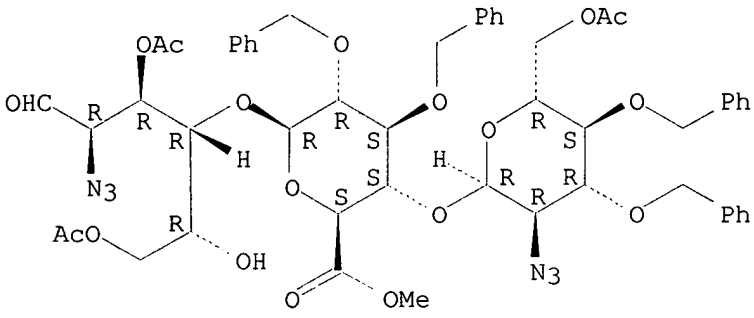
Absolute stereochemistry.



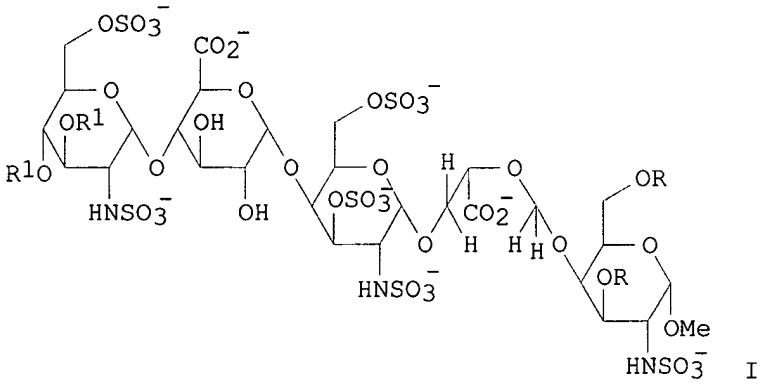
IT **115997-35-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction of, with trichloroacetonitrile)
RN 115997-35-8 HCAPLUS
CN D-Glucose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 15 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1991:143864 HCAPLUS
DN 114:143864
TI Syntheses of heparin-like pentamers containing opened uronic acid moieties
AU Lucas, H.; Basten, J. E. M.; Van Dinther, T. G.; Meuleman, D. G.; Van Aelst, S. F.; Van Boeckel, C. A. A.
CS AKZO Pharma Div., Organon Int. B. V., Oss, 5340 BH, Neth.
SO Tetrahedron (**1990**), 46(24), 8207-28
CODEN: TETRAB; ISSN: 0040-4020
DT Journal
LA English
OS CASREACT 114:143864
GI



I

AB The syntheses of pentasaccharides, e.g. I [R = R1 = H (II); R = SO3H, R1 = H (III), SO3H (IV)], which correspond to the minimal AT III binding region of heparin, and the biol. activities of these compds. are discussed. The key step in the syntheses of these "opened" uronic acid pentamers was the prepn. of the required glyceric acid oxymethylene residues e.g. (R)CH2:CHCH2OCH2CH(CO2Me)OCH2F. III and IV display a significant AT III mediated .alpha.Xa activity. Replacement of the .beta.-D-glucuronic acid unit by an S-glyceric acid oxymethylene residue, e.g. II, leads to almost

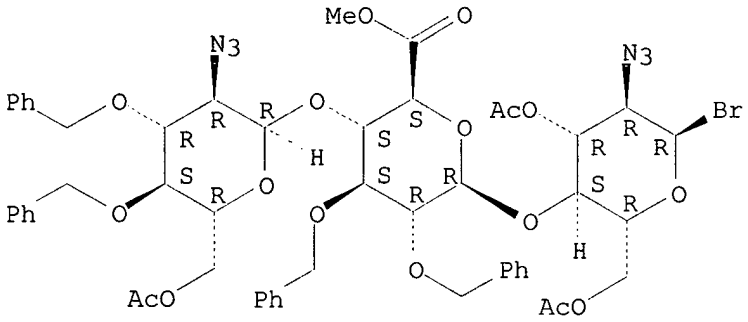
a complete loss of .alpha.Xa activity, notwithstanding the fact that all the essential and contributing charged groups are present in the mol.

IT **132446-47-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(coupling of, with disaccharide)

RN 132446-47-0 HCAPLUS

CN .alpha.-D-Glucopyranosyl bromide, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 16 OF 25 HCAPLUS COPYRIGHT 2002 ACS

AN 1988:529551 HCAPLUS

DN 109:129551

TI Chemical synthesis of L-iduronic acid-containing disaccharidic fragments of heparin

AU Chiba, Taku; Jacquinet, Jean Claude; Sinay, Pierre; Petitou, Maurice; Choay, Jean

CS Lab. Biochim. Struct., Fac. Sci., Orleans, F-45067, Fr.

SO Carbohydrate Research (**1988**), 174, 253-64
CODEN: CRBRAT; ISSN: 0008-6215

DT Journal

LA English

OS CASREACT 109:129551

AB Condensation of Me 3-O-benzyl-2-benzyloxycarbonylamino-6-O-chloroacetyl-2-deoxy-.alpha.-D-glucopyranoside with Me (2,3,4-tri-O-acetyl-.alpha.-L-idopyranosyl bromide)uronate gave 83% Me 3-O-benzyl-2-benzyloxycarbonylamino-6-O-chloroacetyl-2-deoxy-4-O-(Me 2,3,4-tri-O-acetyl-.alpha.-L-idopyranosyluronate)-.alpha.-D-glucopyranoside. Dechloroacetylation followed successively by O-sulfation with SO3-Me3N, acetylation, and sapon. gave the disodium salt of Me 2-acetamido-2-deoxy-4-O-(.alpha.-L-idopyranosyluronic acid)-6-O-sulfo-.alpha.-D-glucopyranoside. Condensation of Me (Me 2,3-di-O-benzyl-.beta.-L-idopyranosid)uronate with 6-O-acetyl-2-azido-3,4-di-O-benzyl-2-deoxy-.alpha.-D-glucopyranosyl bromide gave Me [methyl 4-O-(6-O-acetyl-2-azido-3,4-di-O-benzyl-2-deoxy-.alpha.-D-glucopyranosyl)-2,3-di-O-benzyl-.beta.-L-idopyranosid]uronate. Sapon. followed successively by esterification, O-sulfation, sapon., catalytic hydrogenolysis, and selective N-sulfation gave the trisodium salt of Me 4-O-(2-deoxy-6-O-sulfo-2-sulfoamino-.alpha.-D-glucopyranosyl-.beta.-L-idopyranosiduronicacid.

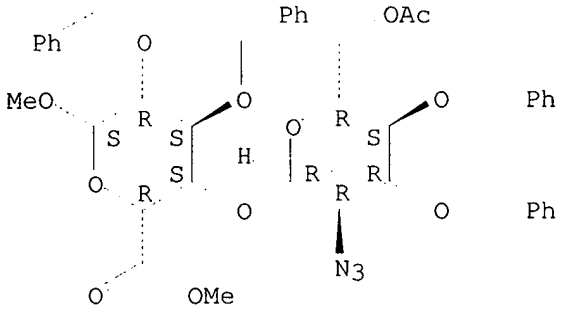
IT **87326-96-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deacetylation of)

RN 87326-96-3 HCAPLUS

CN .beta.-L-Idopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-

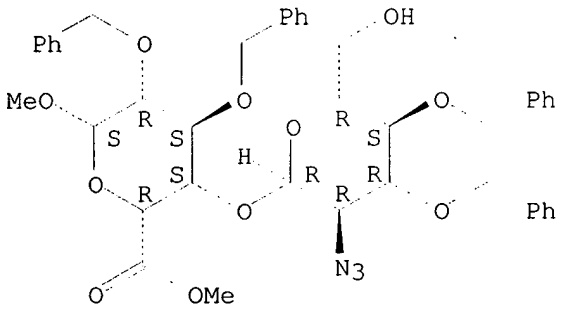
(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **87907-55-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and sulfonation of)
RN 87907-55-9 HCAPLUS
CN .beta.-L-Idopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1988:510766 HCAPLUS
DN 109:110766
TI Synthetic studies on mucopolysaccharides. Part V. Synthesis of methyl glycoside derivatives of tri- and pentasaccharides related to the antithrombin III binding sequence of heparin, employing cellobiose as a key starting material
AU Ichikawa, Yoshitaka; Monden, Ryuji; Kuzuhara, Hiroyoshi
CS RIKEN, Wako, 351-01, Japan
SO Carbohydrate Research (**1988**), 172(1), 37-64
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English
OS CASREACT 109:110766
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

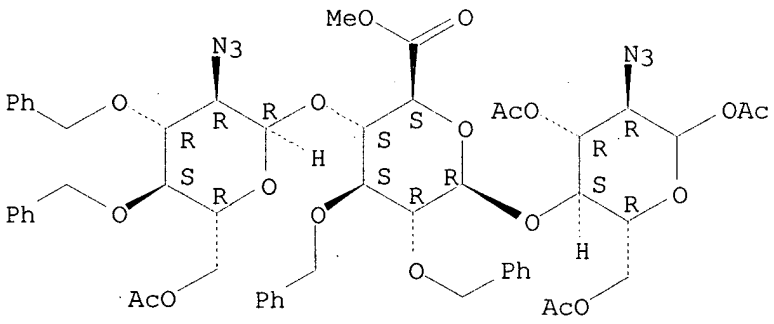
AB Two key synthons for the title pentasaccharide deriv., Me O-(methyl-2-O-benzoyl-3-O-benzyl-.alpha.-L-idopyranosyluronate)-(1 .fwdarw. 4)-6-O-acetyl-2-azido-3-O-benzyl-2-deoxy-.beta.-D-glucopyranoside and O-(Me 2,3-di-O-benzyl-4-O-chloroacetyl-.beta.-D-glucopyranosyluronate)-(1 .fwdarw. 4)-3,6-di-O-acetyl-2-azido-2-deoxy-.alpha.-D-glucopyranosyl bromide, were prepd. from cellobiose. They were coupled to give a tetrasaccharide deriv. that underwent O-dechloroacetylation to the corresponding glycosyl acceptor. Its condensation with the known 6-O-acetyl-2-azido-3,4-di-O-benzyl-2-deoxy-.alpha.-D-glucopyranosyl bromide afforded a 77% yield of suitably protected pentasaccharide, Me O-6-O-acetyl-2-azido-3,4-di-O-benzyl-2-deoxy-.alpha.-D-glucopyranosyl)-(1 .fwdarw. 4)-O-(Me 2,3-di-O-benzyl-.beta.-D-glucopyranosyluronate)-(1 .fwdarw. 4)-O-(3,6-di-O-acetyl-2-azido-2-deoxy-.alpha.-D-glucopyranosyl)-(1 .fwdarw. 4)-O-(Me 2-O-benzoyl-3-O-benzyl-.alpha.-L-idopyranosyluronate)-(1 .fwdarw. 4)-6-O-acetyl-2-azido-3-O-benzyl-2-deoxy-.beta.-D-glucopyranoside. Sequential deprotection and sulfation gave the decasodium salt of Me sulfamidosulfo trisaccharide glycoside I. In a similar way, the trisaccharide deriv., the hexasodium salt of Me O-(2-deoxy-2-sulfamido-6-O-sulfo-.alpha.-D-glucopyranosyl)-(1 .fwdarw. 4)-O-(.beta.-D-glucopyranosyluronic acid)-(1 .fwdarw. 4)-2-deoxy-2-sulfamido-3,6-di-O-sulfo-.alpha.-D-glucopyranoside (II) was synthesized from Me O-(6-O-acetyl-2-azido-3,4-di-O-benzyl-2-deoxy-.alpha.-D-glucopyranosyl)-(1 .fwdarw. 4)-O-(Me 2,3-di-O-benzyl-.beta.-D-glucopyranosyluronate)-3,6-di-O-acetyl-2-azido-2-deoxy-.alpha.-D-glucopyranoside. The pentasaccharide I binds strongly to antithrombin III with an assocn. const. almost equiv. to that of high-affinity heparin, but the trisaccharide II appears not to bind.

IT **99541-28-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(deacetylation of)

RN 99541-28-3 HCAPLUS

CN D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 1,3,6-triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

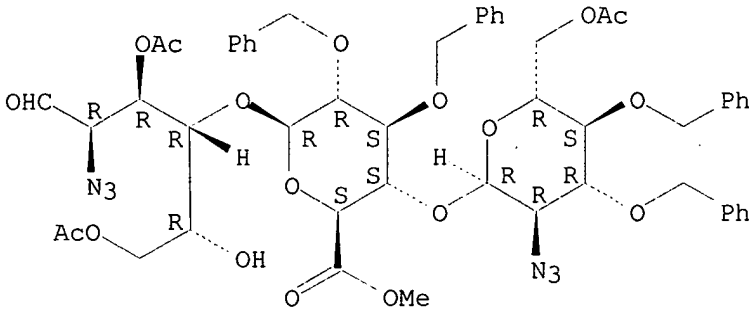


IT **115997-35-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and chlorination of)

RN 115997-35-8 HCAPLUS

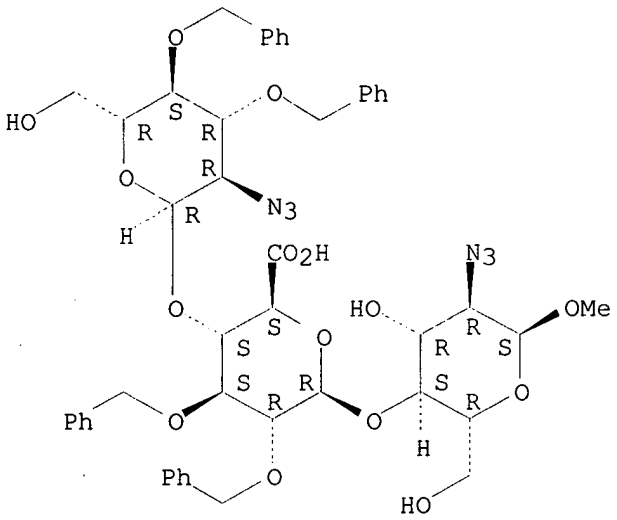
CN D-Glucose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



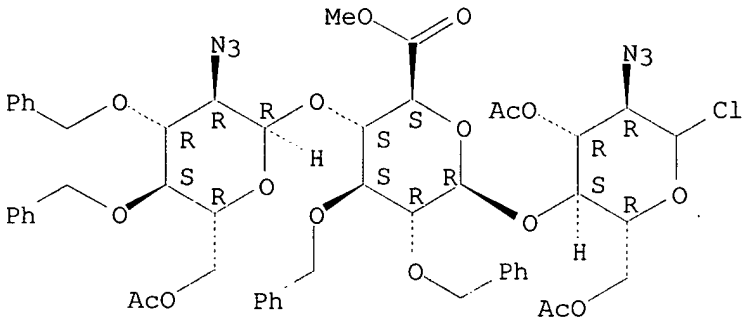
IT **115997-47-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and esterification of)
RN 115997-47-2 HCAPLUS
CN .alpha.-D-Glucopyranoside, methyl O-2-azido-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



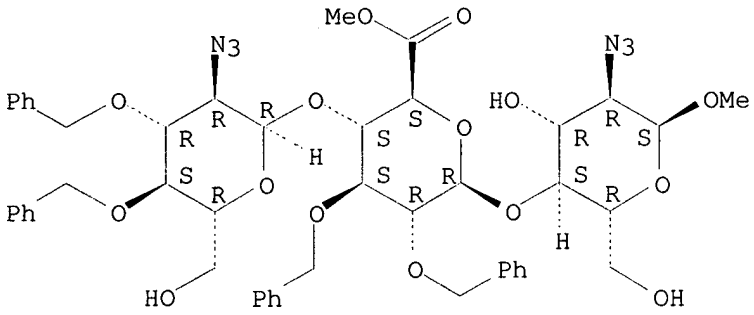
IT **115997-36-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and methanolysis of, in presence of mercuric bromide)
RN 115997-36-9 HCAPLUS
CN D-Glucopyranosyl chloride, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



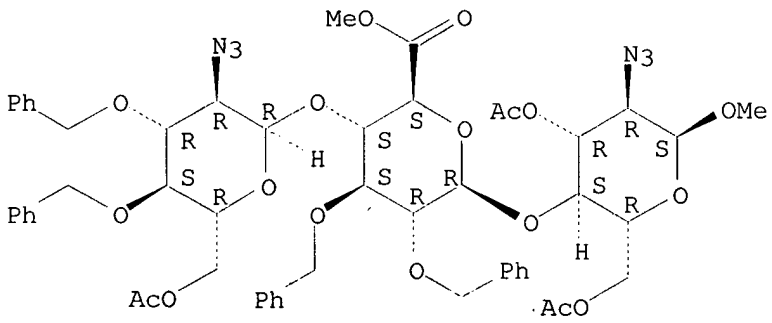
IT **104545-79-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and sulfation of)
RN 104545-79-1 HCAPLUS
CN .alpha.-D-Glucopyranoside, methyl O-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **104545-78-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and O-deacetylation of)
RN 104545-78-0 HCAPLUS
CN .alpha.-D-Glucopyranoside, methyl O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

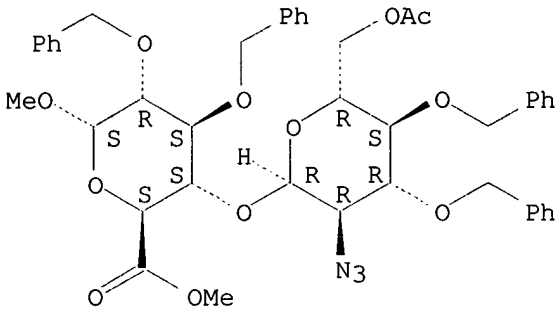


L29 ANSWER 18 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:591571 HCAPLUS
DN 105:191571
TI Disaccharides having a glucosamine and uronic acid structure, and their biological applications
IN Petitou, Maurice; Sinay, Pierre; Choay, Jean; Lormeau, Jean Claude
PA Choay S. A., Fr.
SO U.S., 10 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	US 4607025	A	19860819		US 1982-451615	19821220	<--
	US 4774231	A	19880927		US 1986-888527	19860721	<--
	US 4818816	A	19890404		US 1987-115593	19871026	<--
PRAI	FR 1981-8472		19810428	<--			
	FR 1982-621		19820115	<--			
	FR 1982-1575		19820201	<--			
	FR 1982-2526		19820216	<--			
	FR 1982-9392		19820528	<--			
	FR 1982-10891		19820622	<--			
	FR 1982-10892		19820622	<--			
	FR 1982-11679		19820702	<--			
	FR 1982-13804		19820806	<--			
	FR 1982-15803		19820920	<--			
	FR 1982-15804		19820920	<--			
	FR 1982-18003		19821027	<--			
	US 1982-451615		19821220	<--			
	US 1983-457931		19830114	<--			

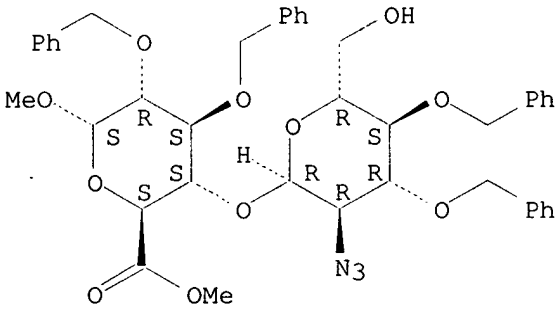
OS CASREACT 105:191571
GI For diagram(s), see printed CA Issue.
AB The title disaccharides (I; R = alkyl, aryl; R1 = H, alkyl, metal cation; R2 = H, PhCH2; R3 = H, Ac, SO3R5; R4 = N3, AcNH, NHSO3R6; R5, R6 = alkali metal cation) were prepd. as antithrombotics. Thus, Me 2,3-di-O-benzyl-.alpha.-D-glucopyranoside was converted in 6 steps to Me (Me 2,3-di-O-benzyl-.alpha.-D-glucopyranoside)uronate. This was treated with a protected azidodeoxyglucopyranosyl bromide to give disaccharide I (R = R1 = Me, R2 = PhCH2 R3 = Ac, R4 = N3). The latter was deacetylated, sulfated, and hydrogenated over Pd/C to give I (R = R1 = Me, R2 = H, R3 = SO3Na, R4 = NH2) which was converted in 4 steps to I (R = Me, R1 = Na, R2 = H, R3 = SO3Na, R4 = NHSO3Na) (II). II is active in the Yin-Wessler test for antithrombotics.
IT **85750-89-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deacetylation of)
RN 85750-89-6 HCAPLUS
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **85743-92-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and sulfation of)
RN 85743-92-6 HCAPLUS
CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 19 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:572985 HCAPLUS
DN 105:172985
TI Oligosaccharides
IN Petitou, Maurice; Lormeau, Jean Claude; Choay, Jean; Jacquinet, Jean Claude; Sinay, Pierre
PA Choay S. A., Fr.
SO Fr. Demande, 48 pp. Add. to Fr. Demande Appl. No. 82 18003.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	FR 2564468	A2	19851122	FR 1984-7589	19840516	<--
	FR 2564468	B2	19941223			
	FR 2535324	A1	19840504	FR 1982-18003	19821027	<--
	WO 8401777	A1	19840510	WO 1983-FR217	19831027	<--
	W: AU, DK, JP, SU, US					
	AU 8321285	A1	19840522	AU 1983-21285	19831027	<--
	AU 581167	B2	19890216			
	EP 113599	A1	19840718	EP 1983-402109	19831027	<--
	EP 113599	B1	19890201			
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE					

JP 59501906	T2	19841115	JP 1983-503432	19831027	<--
JP 05066392	B4	19930921			
ES 527144	A1	19841216	ES 1983-527144	19831027	<--
AT 40555	E	19890215	AT 1983-402109	19831027	<--
CA 1258452	A1	19890815	CA 1983-439811	19831027	<--
DK 8403135	A	19840627	DK 1984-3135	19840627	<--
DK 8502159	A	19851117	DK 1985-2159	19850515	<--
EP 165134	A2	19851218	EP 1985-400953	19850515	<--
EP 165134	A3	19880224			
EP 165134	B1	19930203			
R: AT, BE, CH, DE, GB, IT, LI, LU, NL, SE					
ZA 8503694	A	19860129	ZA 1985-3694	19850515	<--
US 4801583	A	19890131	US 1985-734445	19850515	<--
CA 1265792	A1	19900213	CA 1985-481588	19850515	<--
AT 85341	E	19930215	AT 1985-400953	19850515	<--
AU 8542637	A1	19851121	AU 1985-42637	19850516	<--
AU 582362	B2	19890323			
JP 60260590	A2	19851223	JP 1985-104931	19850516	<--
JP 07108911	B4	19951122			
US 4943630	A	19900724	US 1986-856855	19860421	<--
JP 05262783	A2	19931012	JP 1992-115408	19920408	<--
JP 2510925	B2	19960626			

PRAI	FR 1982-18003	19821027	<--
	FR 1982-621	19820115	<--
	FR 1982-1575	19820201	<--
	FR 1982-2526	19820216	<--
	FR 1982-9392	19820528	<--
	FR 1982-10891	19820622	<--
	FR 1982-10892	19820622	<--
	FR 1982-11679	19820702	<--
	FR 1982-13804	19820806	<--
	FR 1982-15803	19820920	<--
	FR 1982-15804	19820920	<--
	US 1983-457931	19830114	<--
	EP 1983-402109	19831027	<--
	WO 1983-FR217	19831027	<--
	FR 1984-7589	19840516	<--
	US 1984-624628	19840626	<--
	EP 1985-400953	19850515	<--

GI For diagram(s), see printed CA Issue.

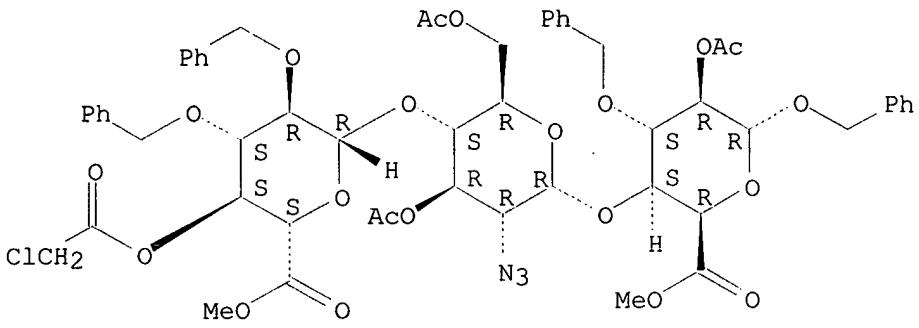
AB Oligosaccharides contg. segments I [R1-R4 = SO3H, P(O)(OH)2; R5-R8 = H, SO3H, P(O)(OH)2; R9, R10 = NH2, acylamino], which were prepd., showed antithrombotic activity. Pentasaccharide II was prepd. in a series of reactions.

IT **104616-03-7P 104616-04-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of)

RN 104616-03-7 HCAPLUS

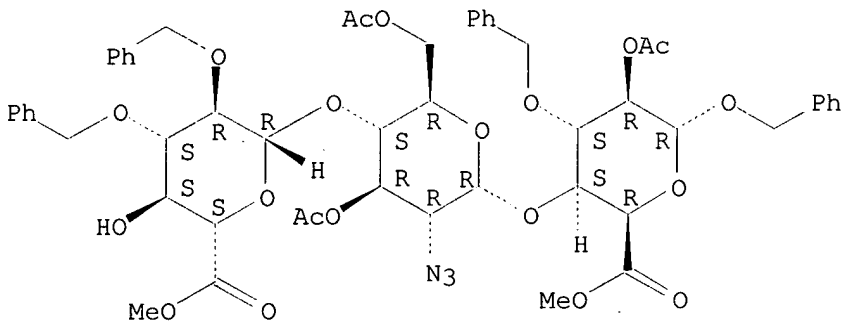
CN .alpha.-L-Idopyranosiduronic acid, phenylmethyl O-4-O-(chloroacetyl)-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-O-3,6-di-O-acetyl-2-azido-2-deoxy-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 104616-04-8 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, phenylmethyl O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-O-3,6-di-O-acetyl-2-azido-2-deoxy-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



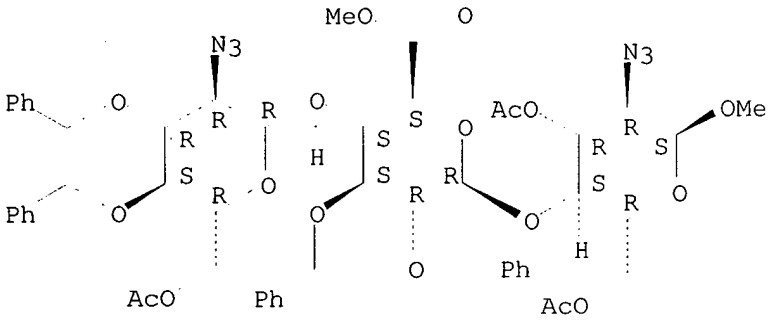
L29 ANSWER 20 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:553457 HCAPLUS
DN 105:153457
TI Synthesis of heparin fragment with high affinity for antithrombin III, utilizing a disaccharide synthon
AU Ichikawa, Yukihiko; Monden, Ryuiji; Kuzuhara, Hiromi
CS Inst. Phys. Chem. Res., Wako, Japan
SO Tennen Yuki Kagobutsu Toronkai Koen Yoshishu (**1985**), 27th, 9-16
CODEN: TYKYDS
DT Journal
LA Japanese
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A complex pentasaccharide, which is the antithrombin III-binding sequence of heparin, was prepd. The disaccharides I and II, obtained from cellobiose, and the monosaccharide III were the key intermediates.
IT **104545-78-0P 104545-79-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, intermediate in synthesis of heparin fragment)
RN 104545-78-0 HCAPLUS
CN .alpha.-D-Glucopyranoside, methyl O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-

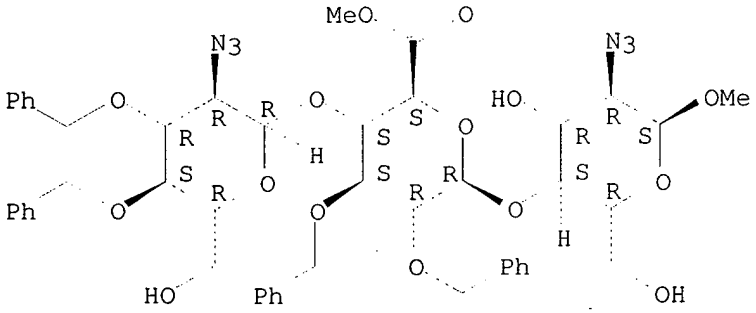
(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

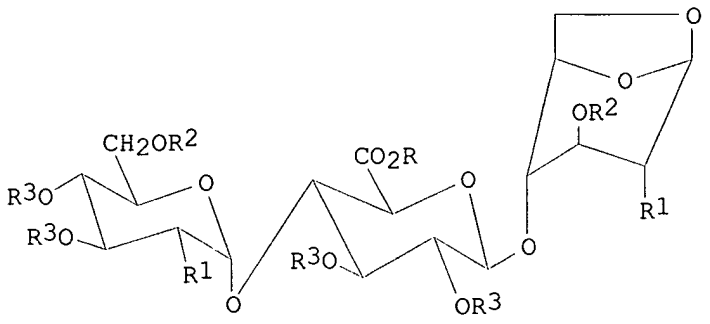


RN 104545-79-1 HCAPLUS
CN .alpha.-D-Glucopyranoside, methyl O-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 21 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:130179 HCAPLUS
DN 104:130179
TI Synthetic studies on mucopolysaccharides. Part III. Synthesis, from cellobiose of a trisaccharide closely related to the GlcNAc .fwdarw. GlcA .fwdarw. GlcN segment of the antithrombin-binding sequence of heparin
AU Ichikawa, Yoshitaka; Ichikawa, Ryuji; Kuzuhara, Hiroyoshi
CS Inst. Phys. Chem. Res., RIKEN, Wako, 351-01, Japan
SO Carbohydrate Research (**1985**), 141(2), 273-82
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English
OS CASREACT 104:130179
GI



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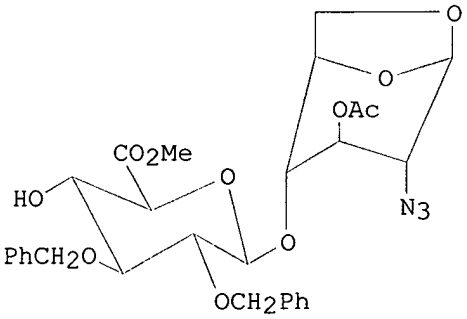
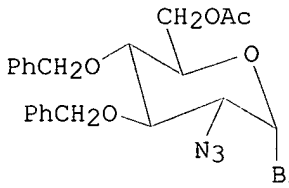


II



III

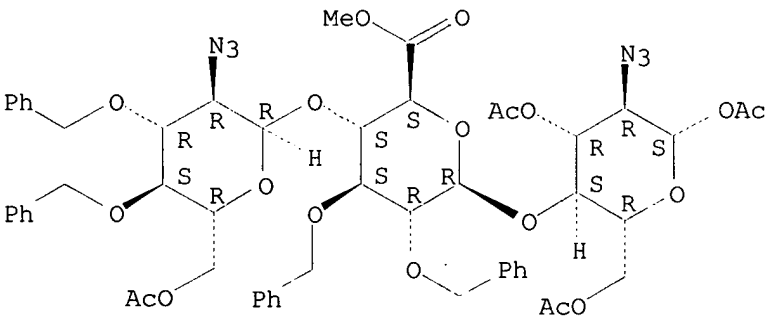
AB Azidoglucopyranose trisaccharide I (R = Me, R1 = N3, R2 = Ac, R3 = CH2Ph) was prepd. by glycosidation of glucopyranosyl bromide II with anhydroazidoglucopyranose III in the presence of HgBr2 and mol. sieves. Subsequently azide redn. and sulfonation with SO3.NMe3 yielded the heparin-related oligosaccharide I (R = Na, R1 = NHSO3Na, R2 = SO3N, R3 = H). I (R = Me, R1 = N3, R2 = Ac, R3 = CH2Ph) also underwent acetolysis with Ac2O and CF3CO2H.

IT **100838-13-9P 100838-64-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 100838-13-9 HCAPLUS

CN .beta.-D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 1,3,6-triacetate (9CI) (CA INDEX NAME)

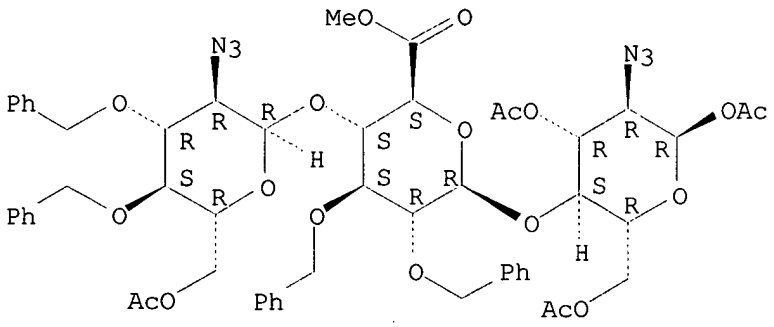
Absolute stereochemistry.



RN 100838-64-0 HCAPLUS

CN .alpha.-D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 1,3,6-triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

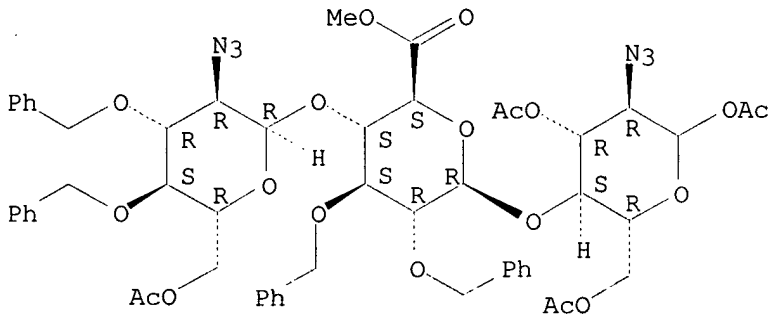


L29 ANSWER 22 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:19773 HCAPLUS
DN 104:19773
TI Trisaccharides
PA Institute of Physical and Chemical Research, Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60094989	A2	19850528	JP 1983-204440	19831031 <--

GI For diagram(s), see printed CA Issue.
AB Trisaccharide deriv. I (Q = PhCH2), potential antithrombotic (no data), was prepd. by cyclocondensation of the benzylidenated disaccharide II with (Me2CH)2SiClOSiCl(CHMe2)2, deacetylation of the resulting IV, benzylation, desilylation, epoxidn., azidolysis/acetylation, debenzylidenation, tritylation/chloroacetylation, deacetylation, Jones oxidn./methylation, dechloroacetylation, condensation with the bromomonosaccharide deriv. V, and acetolysis.
IT **99541-28-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as potential antithrombotic)
RN 99541-28-3 HCAPLUS
CN D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-6-methyl-2,3-bis-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 1,3,6-triacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



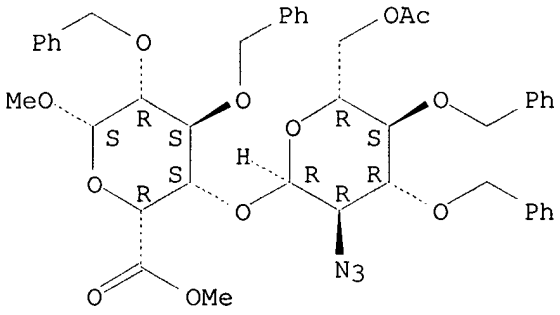
L29 ANSWER 23 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1984:7066 HCAPLUS
DN 100:7066
TI Organic oligosaccharides, corresponding to fragments of natural mucopolysaccharides, and their biological applications
IN Petitou, Maurice; Jacquinet, Jean Claude; Sinay, Pierre; Choay, Jean; Lormeau, Jean Claude; Nassr, Mahmoud
PA Choay S. A., Fr.
SO Eur. Pat. Appl., 187 pp.
CODEN: EPXXDW
DT Patent
LA French
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	EP 84999	A1	19830803	EP 1983-400110	19830117	<--
	EP 84999	B1	19880413			
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE					
	FR 2519987	A1	19830722	FR 1982-621	19820115	<--
	FR 2520744	A1	19830805	FR 1982-1575	19820201	<--
	FR 2521566	A1	19830819	FR 1982-2526	19820216	<--
	FR 2527614	A1	19831202	FR 1982-9392	19820528	<--
	FR 2528853	A1	19831223	FR 1982-10891	19820622	<--
	FR 2528854	A1	19831223	FR 1982-10892	19820622	<--
	FR 2529557	A1	19840106	FR 1982-11679	19820702	<--
	FR 2531436	A1	19840210	FR 1982-13804	19820806	<--
	FR 2533219	A1	19840323	FR 1982-15803	19820920	<--
	FR 2533220	A1	19840323	FR 1982-15804	19820920	<--
	FR 2535324	A1	19840504	FR 1982-18003	19821027	<--
	US 4987223	A	19910122	US 1982-453731	19821027	<--
	CA 1265132	A1	19900130	CA 1983-419417	19830113	<--
	DK 8300143	A	19830716	DK 1983-143	19830114	<--
	AU 8310397	A1	19830721	AU 1983-10397	19830114	<--
	AU 563351	B2	19870709			
	JP 58170797	A2	19831007	JP 1983-5178	19830114	<--
	JP 05065517	B4	19930917			
	ES 519232	A1	19840316	ES 1983-519232	19830114	<--
	SU 1694065	A3	19911123	SU 1983-3545151	19830114	<--
	AT 33496	E	19880415	AT 1983-400110	19830117	<--
	AU 8321285	A1	19840522	AU 1983-21285	19831027	<--
	AU 581167	B2	19890216			
	JP 59501906	T2	19841115	JP 1983-503432	19831027	<--
	JP 05066392	B4	19930921			
	AT 40555	E	19890215	AT 1983-402109	19831027	<--
	DK 8403135	A	19840627	DK 1984-3135	19840627	<--
	US 4943630	A	19900724	US 1986-856855	19860421	<--
	JP 05331182	A2	19931214	JP 1992-115407	19920408	<--
	JP 2510454	B2	19960626			

PRAI	FR 1982-621	19820115	<--
	FR 1982-1575	19820201	<--
	FR 1982-2526	19820216	<--
	FR 1982-9392	19820528	<--
	FR 1982-10891	19820622	<--
	FR 1982-10892	19820622	<--
	FR 1982-11679	19820702	<--
	FR 1982-13804	19820806	<--
	FR 1982-15803	19820920	<--
	FR 1982-15804	19820920	<--
	FR 1982-18003	19821027	<--
	FR 1981-24132	19811223	<--
	FR 1982-18001	19821027	<--
	EP 1983-400110	19830117	<--
	EP 1983-402109	19831027	<--

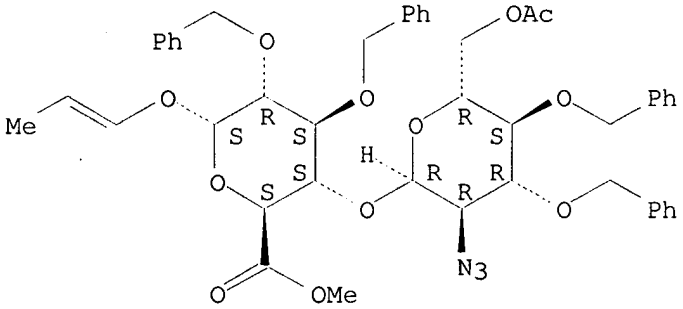
WO 1983-FR217 19831027 <--
US 1984-624628 19840626 <--
OS CASREACT 100:7066
GI For diagram(s), see printed CA Issue.
AB Mucopolysaccharide fragments were synthesized. Thus the pentasaccharide I was prepd from the monosaccharides in a synthesis comprising many steps. I has factor Xa antigonist activity >2000 U/mg.
IT **87326-96-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and deacetylation of)
RN 87326-96-3 HCAPLUS
CN .beta.-L-Idopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **87326-45-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and dealkylation of)
RN 87326-45-2 HCAPLUS
CN .alpha.-D-Glucopyranosiduronic acid, 1-propenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

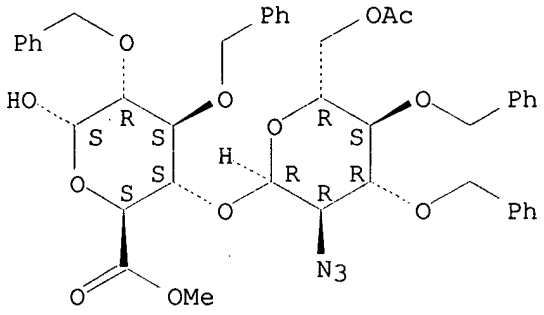
Absolute stereochemistry.
Double bond geometry unknown.



IT **87907-19-5P 87907-20-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and hydrogenation of)
RN 87907-19-5 HCAPLUS
CN .alpha.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl

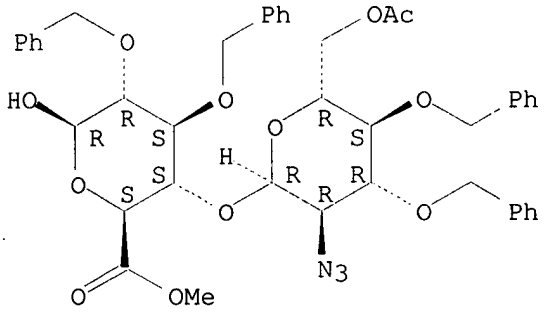
ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



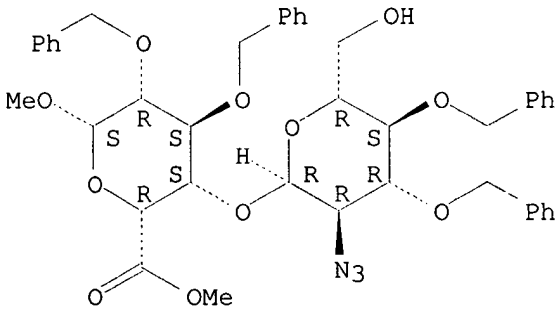
RN 87907-20-8 HCAPLUS
CN .beta.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **87907-55-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and sulfonylation of)
RN 87907-55-9 HCAPLUS
CN .beta.-L-Idopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

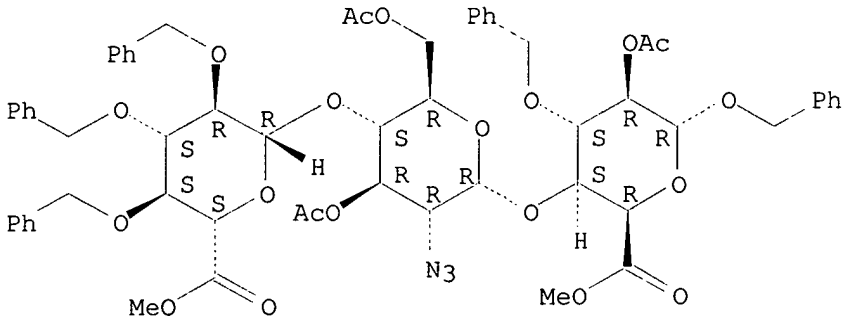
Absolute stereochemistry.



IT **87327-02-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)
RN 87327-02-4 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, phenylmethyl O-6-methyl-2,3,4-tris-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-O-3,6-di-O-acetyl-2-azido-2-deoxy-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 24 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1983:558783 HCAPLUS
DN 99:158783
TI Derivatives with a uronic acid structure and their biological applications
IN Choay, Jean; Jacquinet, Jean Claude; Petitou, Maurice; Sinay, Pierre
PA Choay S. A., Fr.
SO Eur. Pat. Appl., 84 pp.
CODEN: EPXXDW
DT Patent
LA French
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	EP 82793	A1	19830629	EP 1982-402378	19821223	<--
	EP 82793	B1	19890510			
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE					
	FR 2518550	A1	19830624	FR 1981-24132	19811223	<--
	FR 2519987	A1	19830722	FR 1982-621	19820115	<--
	FR 2520744	A1	19830805	FR 1982-1575	19820201	<--
	EP 64012	A1	19821103	EP 1982-400770	19820428	<--
	EP 64012	B1	19860723			
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE					
	FR 2527614	A1	19831202	FR 1982-9392	19820528	<--
	FR 2531436	A1	19840210	FR 1982-13804	19820806	<--
	FR 2533219	A1	19840323	FR 1982-15803	19820920	<--
	FR 2533220	A1	19840323	FR 1982-15804	19820920	<--
	FR 2535323	A1	19840504	FR 1982-18001	19821027	<--
	FR 2535323	B1	19870814			
	US 4987223	A	19910122	US 1982-453731	19821027	<--
	AT 42956	E	19890515	AT 1982-402378	19821223	<--
	SU 1694065	A3	19911123	SU 1983-3545151	19830114	<--
PRAI	FR 1981-24132		19811223	<--		
	FR 1982-621		19820115	<--		
	FR 1982-1575		19820201	<--		
	EP 1982-400770		19820428	<--		
	FR 1982-9392		19820528	<--		
	FR 1982-13804		19820806	<--		
	FR 1982-15803		19820920	<--		
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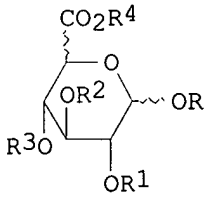
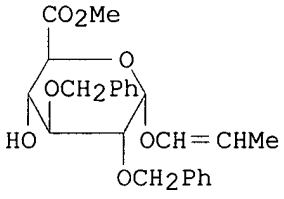
	FR 1982-18001		19821027	<--		

FR 1981-8472 19810428 <--
FR 1982-2526 19820216 <--
FR 1982-10891 19820622 <--
FR 1982-10892 19820622 <--
EP 1982-402378 19821223 <--
OS CASREACT 99:158783
GI



I



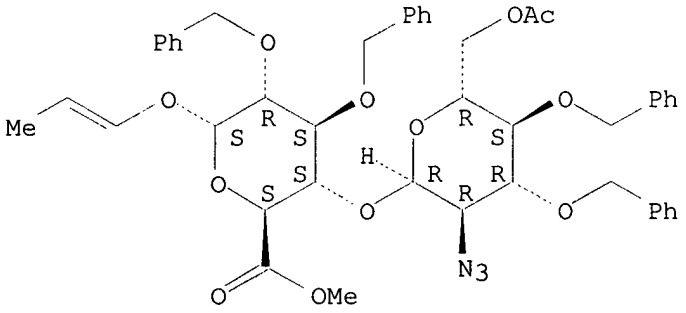
II

AB Uronic acids I (OR-OR4 = reactive group, functionalizable group, protected OH) were prepd. for use as intermediates in the prepn. of enzyme substrates, haptens, or reagents. Thus, II was prepd. from glucose in 11 steps via glycosidation with allyl alc., CrO3 oxidn., and isomerization of the allyl glycoside.

IT **87326-45-2P 87326-96-3P 87327-02-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

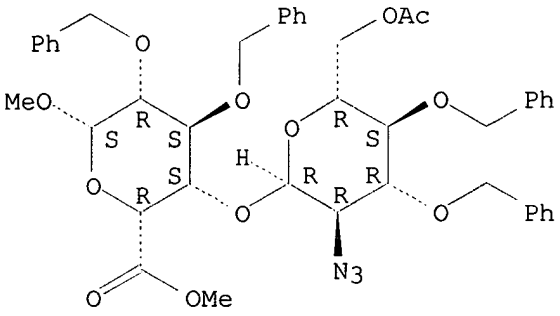
RN 87326-45-2 HCAPLUS
CN .alpha.-D-Glucopyranosiduronic acid, 1-propenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



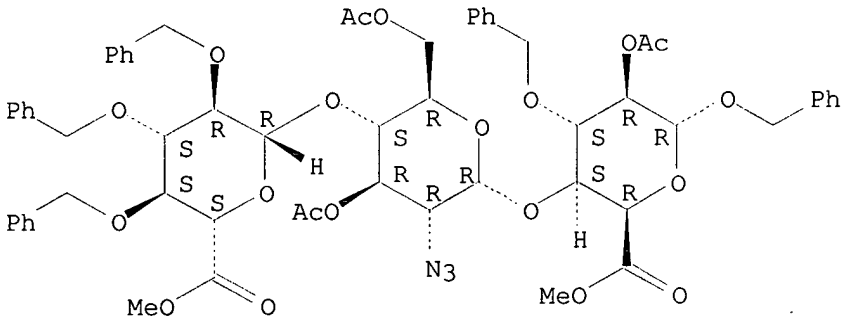
RN 87326-96-3 HCAPLUS
CN .beta.-L-Idopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 87327-02-4 HCAPLUS
CN .alpha.-L-Idopyranosiduronic acid, phenylmethyl O-6-methyl-2,3,4-tris-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-O-3,6-di-O-acetyl-2-azido-2-deoxy-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L29 ANSWER 25 OF 25 HCAPLUS COPYRIGHT 2002 ACS
AN 1983:198659 HCAPLUS
DN 98:198659
TI Disaccharides having units with a glucosamine and with a uronic-acid structure and their biological application
IN Petitou, Maurice; Sinay, Pierre; Choay, Jean; Lormeau, Jean Claude
PA Choay S. A., Fr.
SO Eur. Pat. Appl., 28 pp.
CODEN: EPXXDW
DT Patent
LA French
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 64012	A1	19821103	EP 1982-400770	19820428 <--
	EP 64012	B1	19860723		
	R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	FR 2504535	A1	19821029	FR 1981-8472	19810428 <--
	FR 2504535	B1	19870814		
	WO 8203863	A1	19821111	WO 1982-FR76	19820428 <--
	W: AU, DK, JP, SU, US				
	AU 8283955	A1	19821124	AU 1982-83955	19820428 <--
	AU 558472	B2	19870129		
	ES 512381	A1	19830301	ES 1982-512381	19820428 <--
	JP 58500564	T2	19830414	JP 1982-501461	19820428 <--
	JP 03013240	B4	19910222		

	AT 20894	E	19860815	AT 1982-400770	19820428 <--
	CA 1263381	A1	19891128	CA 1982-401832	19820428 <--
	CA 1247608	A1	19881227	CA 1982-418397	19821222 <--
	EP 82793	A1	19830629	EP 1982-402378	19821223 <--
	EP 82793	B1	19890510		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 59010599	A2	19840120	JP 1982-234948	19821223 <--
	JP 04071919	B4	19921116		
	AT 42956	E	19890515	AT 1982-402378	19821223 <--
	SU 1470196	A3	19890330	SU 1982-3528900	19821227 <--
	DK 8205756	A	19821228	DK 1982-5756	19821228 <--
PRAI	FR 1981-8472		19810428 <--		
	FR 1981-24132		19811223 <--		
	FR 1982-621		19820115 <--		
	FR 1982-1575		19820201 <--		
	FR 1982-2526		19820216 <--		
	EP 1982-400770		19820428 <--		
	WO 1982-FR76		19820428 <--		
	FR 1982-9392		19820528 <--		
	FR 1982-10891		19820622 <--		
	FR 1982-10892		19820622 <--		
	FR 1982-13804		19820806 <--		
	FR 1982-15803		19820920 <--		
	FR 1982-15804		19820920 <--		
	FR 1982-18001		19821027 <--		
	EP 1982-402378		19821223 <--		

GI For diagram(s), see printed CA Issue.

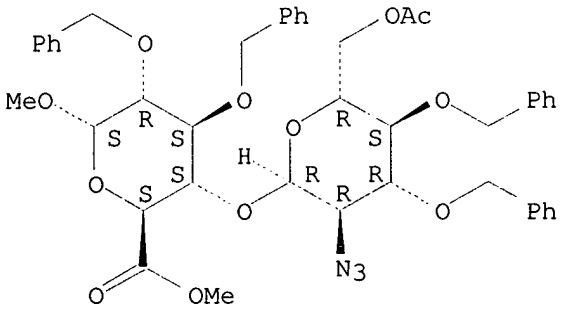
AB Disaccharides I (R = H, SO3M, Ac; R1 = H; R2 = N3, amino; R3 = H, alkyl, cation; M = cation) were prepd. Thus, Me 2,3-di-O-benzyl-.alpha.-D-glucopyranoside was protected and oxidized to the acid which was converted to its Me ester and treated with azidobromoglucose deriv. to give I (R = Ac, R1 = CH2Ph, R2 = N3, R3 = Me). Sapon. of the latter compd. and treatment with Me3N-SO3, and hydrogenation gave I (R = SO3Na, R1 = H, R2 = NH2, R3 = Me) which was converted to I [R = SO3Na, R1 = H, R2 = NHAc, NHSO3Na (II), R3 = Na]. II had a factor of Xa inhibiting activity of 1000-2000 units/g.

IT **85750-89-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and sapon. of)

RN 85750-89-6 HCAPLUS

CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

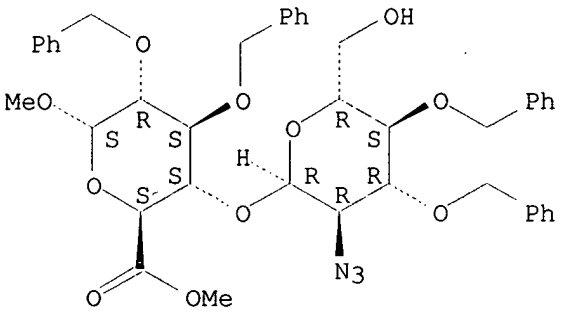


IT **85743-92-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and sulfonylation of)

RN 85743-92-6 HCAPLUS

CN .alpha.-D-Glucopyranosiduronic acid, methyl 4-O-[2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-2,3-bis-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



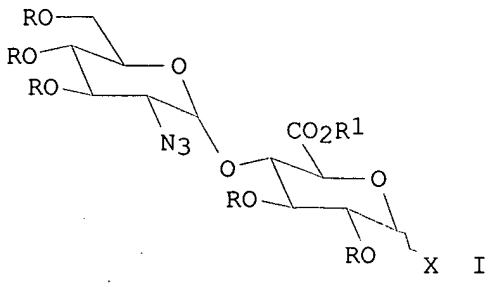
=> d all hitstr tot

L38 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:574867 HCAPLUS
DN 137:125357
TI Solid- and solution-phase combinatorial libraries synthesis of heparin and other glycosaminoglycans as potential receptors
IN **Seeberger, Peter H.; Orgueira, Hernan; Schell, Peter**
PA Massachusetts Institute of Technology, USA
SO PCT Int. Appl., 131 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K
CC 33-8 (Carbohydrates)
Section cross-reference(s): 1, 3
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002058633	A2	20020801	WO 2002-US1772	20020122
WO 2020058633	A3	20021017		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2001-263621P P 20010123
OS MARPAT 137:125357
GI



AB Described is a modular, general synthetic strategy for the prepn. in soln. and on a solid support of heparin, heparin-like glycosaminoglycans, glycosaminoglycans and non-natural analogs, e.g. I, wherein X is OH, acyloxy, silyloxy, halide, alkylthio, arylthio, alkoxy, OC(NH)CCl3; R is H, alkyl, aryl, arylalkyl, heteroarylalkyl, silyl, acyl, alkenyloxycarbonyl, aralkyloxycarbonyl; R1 is H, alkyl, aryl, arylalkyl, heteroarylalkyl and derivs. Addnl., the modular strategy provides the basis for the prepn. of combinatorial libraries and parallel libraries of defined glycosaminoglycan oligosaccharides. The defined glycosaminoglycan structures may be used in high-throughput screening expts. to identify carbohydrate sequences that regulate a host of recognition and signal-transduction processes. The detn. of specific sequences involved in receptor binding holds great promise for the development of mol. tools which will allow modulation of processes underlying viral entry, angiogenesis, kidney diseases and diseases of the control nervous system (no data). Notably, the present invention enables the automated synthesis of glycosaminoglycans in much the same fashion that peptides and oligonucleotides are currently assembled. Thus, n-pentenyl (2-deoxy-2-sodium sulfonatamido-3,4,6-tri-O-sodium sulfonato-.alpha.-D-glucopyranosyl)-(1.fwdarw.4)-(sodium 2-O-sodium sulfonato-.alpha.-D-idopyranosyluronate)-(1.fwdarw.4)-(2-deoxy-2-sodium sulfonatamido-6-O-sodium sulfonato-.alpha.-D-glucopyranosyl)-(1.fwdarw.4)-sodium 2-O-sodium sulfonato-.beta.-D-glucopyranosiduronate was prepd. as potential receptors.

ST solid phase prepn combinatorial glycosaminoglycan oligosaccharide uronate heparin

IT Combinatorial library
Solid phase synthesis
(solid-phase combinatorial libraries synthesis of glycosaminoglycans as potential receptors)

IT Oligosaccharides, preparation
Receptors
RL: CPN (Combinatorial preparation); IMF (Industrial manufacture); SPN (Synthetic preparation); CMBI (Combinatorial study); PREP (Preparation)
(solid-phase combinatorial libraries synthesis of glycosaminoglycans as potential receptors)

IT 80321-89-7P 87326-73-6P 92955-17-4P 99049-65-7P 120312-09-6P
138889-14-2P 138923-10-1P 154920-34-0P 154970-28-2P 385422-21-9P
385422-22-0P 444118-29-0P 444118-30-3P 444118-31-4P 444118-32-5P
444118-33-6P 444118-34-7P 444118-35-8P 444118-36-9P 444118-37-0P
444118-38-1P 444118-39-2P 444118-40-5P 444118-41-6P 444118-42-7P
444118-44-9P 444118-45-0P 444118-47-2P 444118-48-3P
444118-49-4P 444118-50-7P 444118-51-8P **444118-52-9P**
444118-53-0P 444118-54-1P 444118-55-2P **444118-56-3P**
444118-57-4P 444118-58-5P 444118-59-6P
444118-60-9P 444118-61-0P 444118-62-1P
444118-63-2P 444118-64-3P 444118-65-4P
444118-66-5P 444118-67-6P 444118-68-7P
444118-69-8P 444118-70-1P 444118-71-2P

444118-72-3P 444118-73-4P 444118-74-5P
444118-75-6P 444118-76-7P 444118-77-8P
444118-78-9P 444118-79-0P 444118-81-4P 444118-82-5P
444118-83-6P 444118-84-7P 444118-85-8P 444118-87-0P
444118-88-1P 444118-89-2P 444118-90-5P
444118-91-6P 444118-94-9P 444118-99-4P 444119-00-0P
444119-01-1P 444119-02-2P 444119-03-3P **444119-04-4P**
444119-05-5P 444119-06-6P 444119-07-7P
444119-08-8P 444119-09-9P 444119-10-2P 444119-11-3P 444119-12-4P
444119-13-5P 444119-14-6P 444119-15-7P **444119-22-6P**
444119-23-7P 444119-41-9P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(solid-phase combinatorial libraries synthesis of glycosaminoglycans as potential receptors)

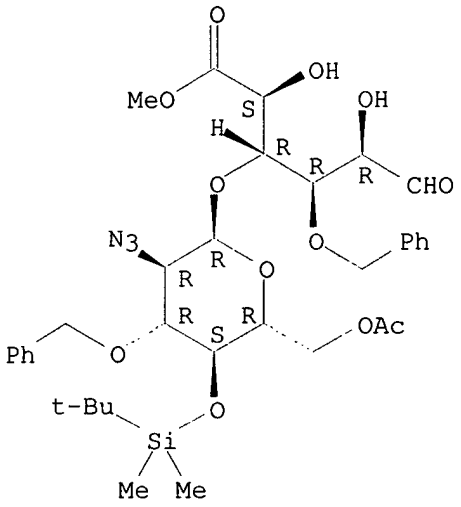
IT 87326-76-9P 444118-43-8P 444118-46-1P **444118-80-3P**
444118-86-9P 444118-92-7P 444118-93-8P 444118-95-0P 444118-96-1P
444118-97-2P 444118-98-3P **444119-16-8P 444119-17-9P**
444119-18-0P 444119-19-1P 444119-20-4P
444119-21-5P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(solid-phase combinatorial libraries synthesis of glycosaminoglycans as potential receptors)

IT 56-40-6, Glycine, reactions 66-84-2, Glucosamine hydrochloride
582-52-5 171032-74-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(solid-phase combinatorial libraries synthesis of glycosaminoglycans as potential receptors)

IT **444118-49-4P 444118-52-9P 444118-56-3P**
444118-57-4P 444118-58-5P 444118-59-6P
444118-60-9P 444118-61-0P 444118-62-1P
444118-63-2P 444118-64-3P 444118-65-4P
444118-66-5P 444118-67-6P 444118-68-7P
444118-69-8P 444118-70-1P 444118-71-2P
444118-72-3P 444118-73-4P 444118-74-5P
444118-75-6P 444118-76-7P 444118-77-8P
444118-78-9P 444118-79-0P 444118-88-1P
444118-89-2P 444118-90-5P 444118-91-6P
444119-04-4P 444119-05-5P 444119-06-6P
444119-07-7P 444119-22-6P 444119-23-7P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(solid-phase combinatorial libraries synthesis of glycosaminoglycans as potential receptors)

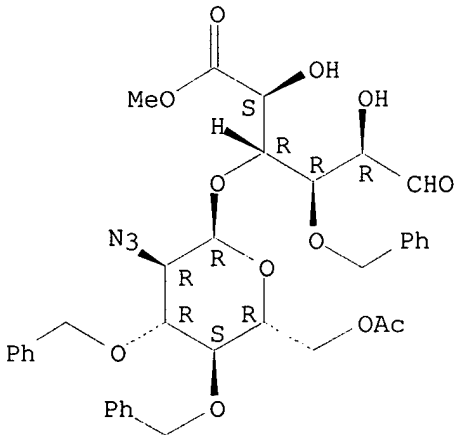
RN 444118-49-4 HCAPLUS
CN D-Glucuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



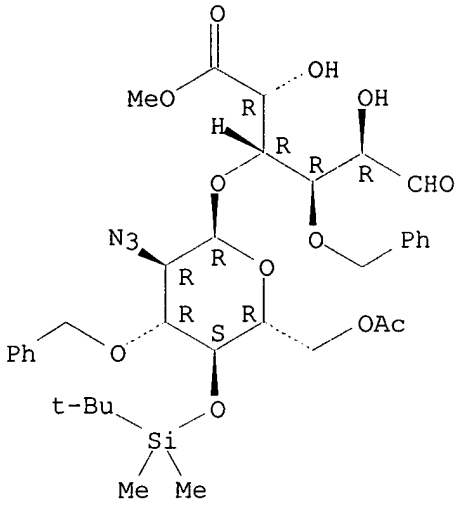
RN 444118-52-9 HCAPLUS
CN D-Glucuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



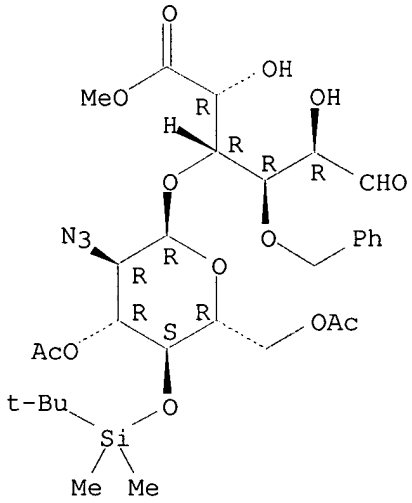
RN 444118-56-3 HCAPLUS
CN L-Iduronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



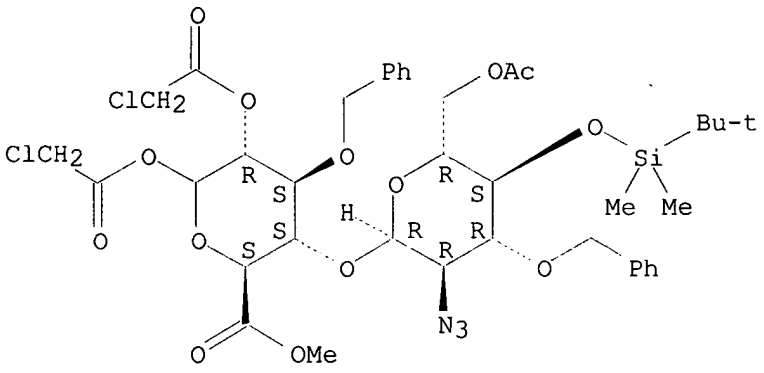
RN 444118-57-4 HCAPLUS
CN L-Iduronic acid, 4-O-[3,6-di-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



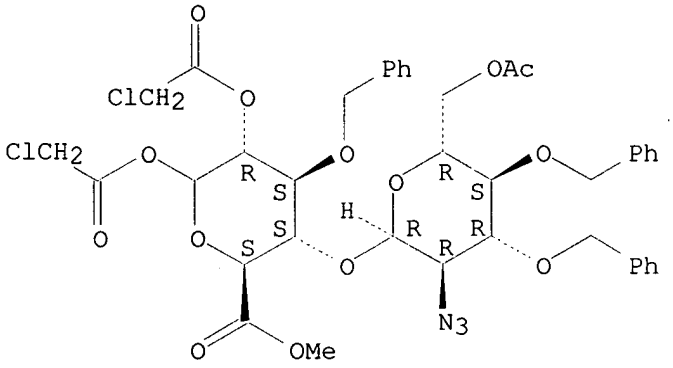
RN 444118-58-5 HCAPLUS
CN D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 1,2-bis(chloroacetate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



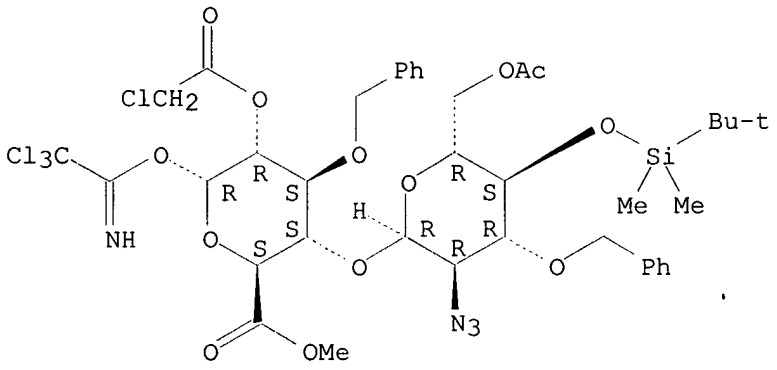
RN 444118-59-6 HCAPLUS
CN D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 1,2-bis(chloroacetate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 444118-60-9 HCAPLUS
CN .alpha.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(chloroacetate) 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

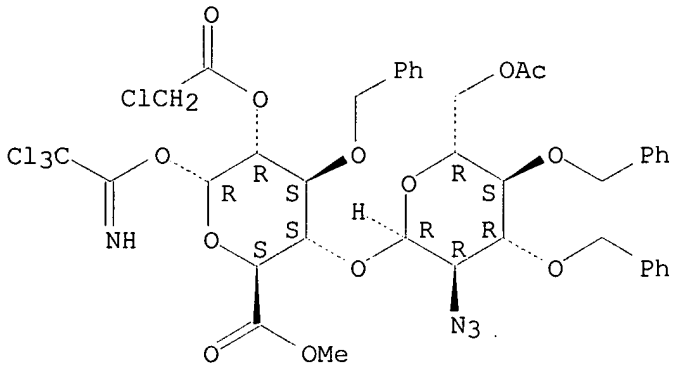
Absolute stereochemistry. Rotation (+).



RN 444118-61-0 HCAPLUS
CN .alpha.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-

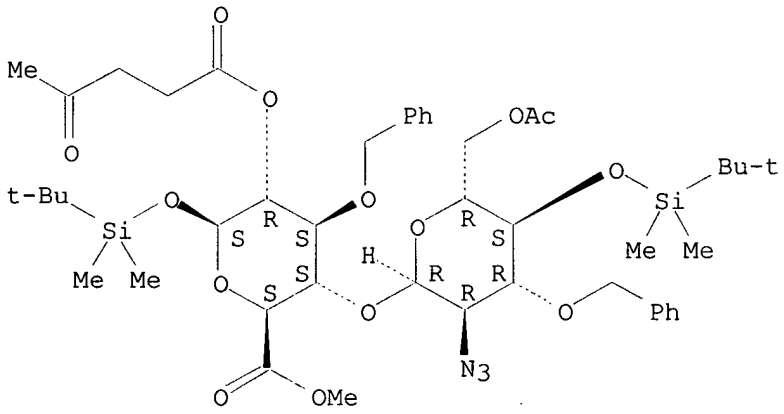
(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(chloroacetate) 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



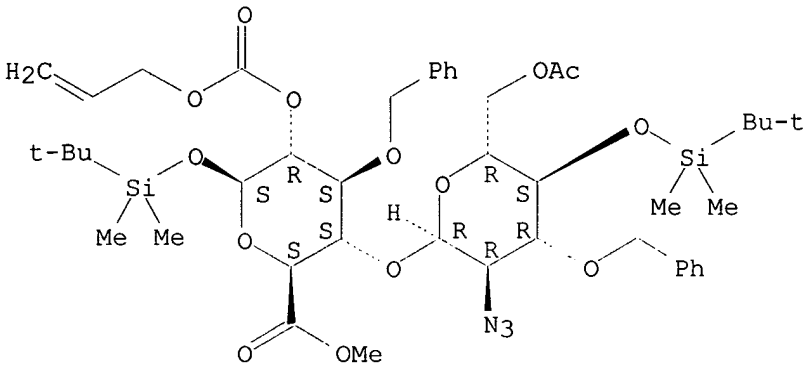
RN 444118-62-1 HCAPLUS
CN .beta.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-1-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-, methyl ester, 2-(4-oxopentanoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



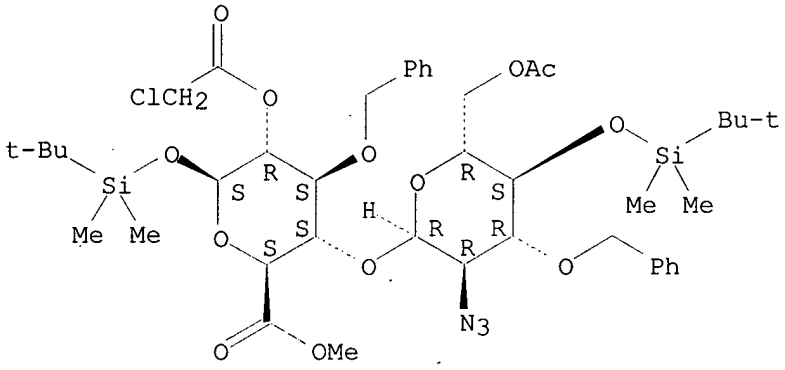
RN 444118-63-2 HCAPLUS
CN .beta.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-1-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-, methyl ester, 2-(2-propenyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



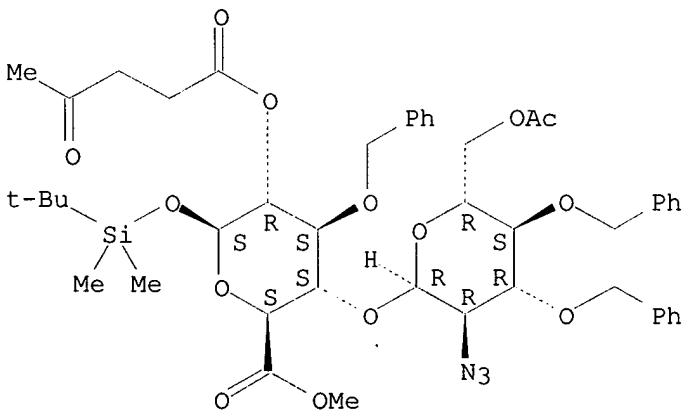
RN 444118-64-3 HCAPLUS
CN .beta.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-1-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-, methyl ester, 2-(chloroacetate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



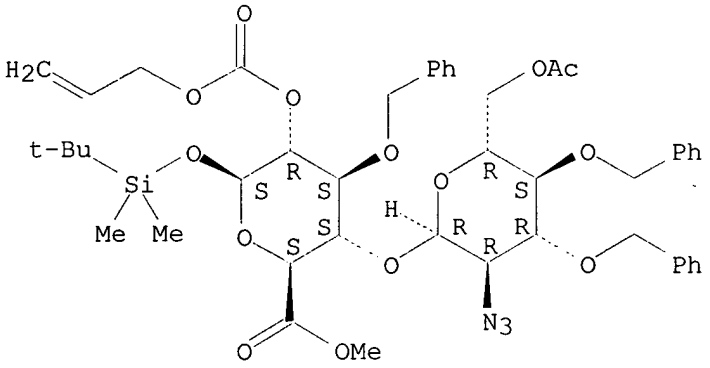
RN 444118-65-4 HCAPLUS
CN .beta.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-1-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-, methyl ester, 2-(4-oxopentanoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



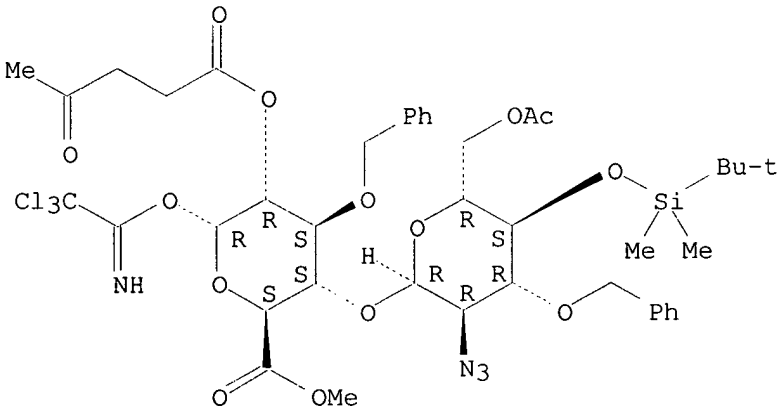
RN 444118-66-5 HCAPLUS
CN .beta.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-1-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-, methyl ester, 2-(2-propenyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



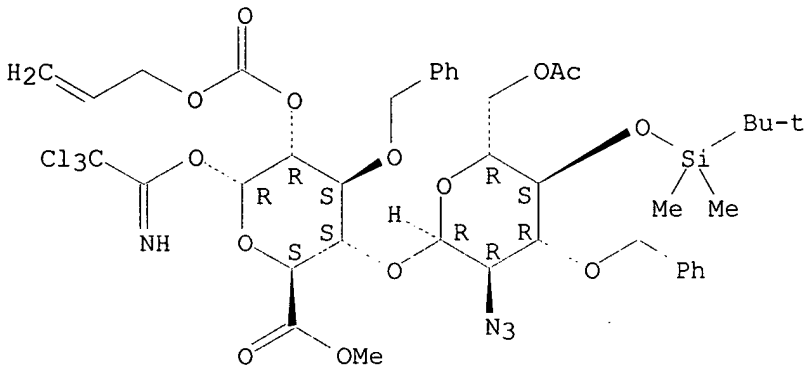
RN 444118-67-6 HCAPLUS
CN .alpha.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(4-oxopentanoate) 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



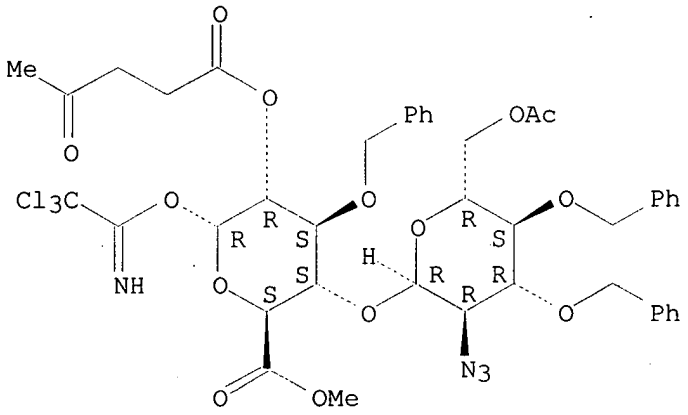
RN 444118-68-7 HCAPLUS
CN .alpha.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(2-propenyl carbonate) 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



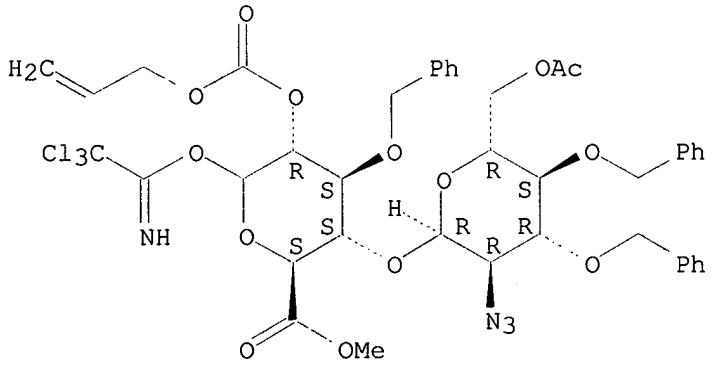
RN 444118-69-8 HCAPLUS
CN .alpha.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(4-oxopentanoate) 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



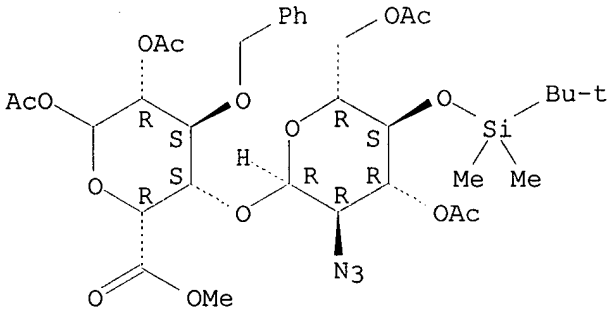
RN 444118-70-1 HCAPLUS
CN D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(2-propenyl carbonate) 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



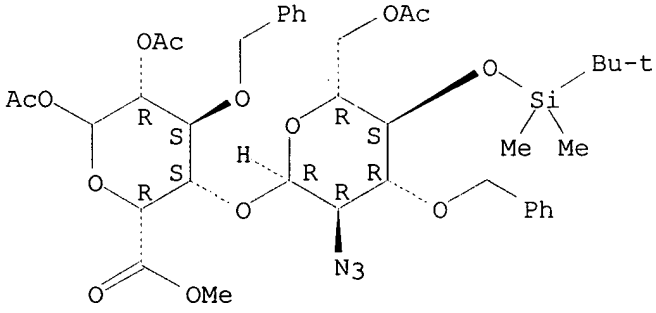
RN 444118-71-2 HCAPLUS
CN L-Idopyranuronic acid, 4-O-[3,6-di-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 1,2-diacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



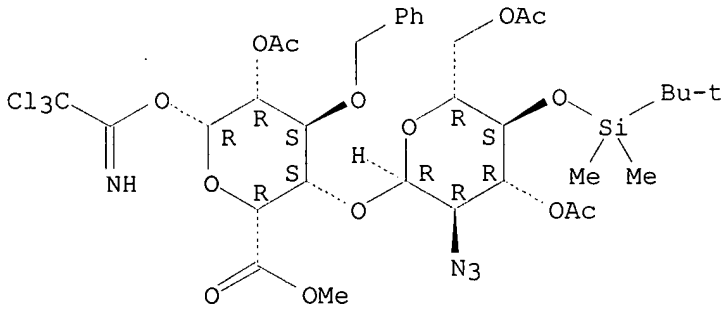
RN 444118-72-3 HCAPLUS
CN L-Idopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 1,2-diacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 444118-73-4 HCAPLUS
CN .beta.-L-Idopyranuronic acid, 4-O-[3,6-di-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

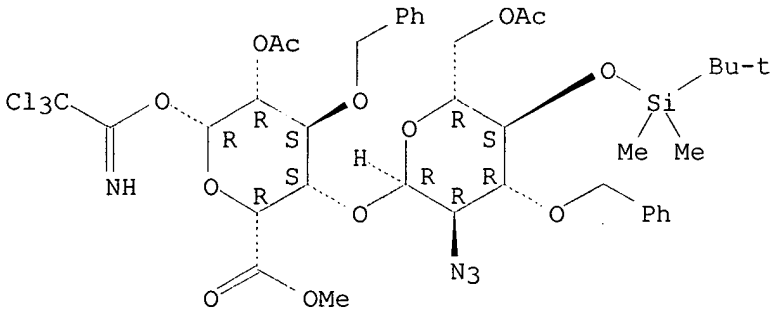
Absolute stereochemistry. Rotation (+).



RN 444118-74-5 HCAPLUS

CN .beta.-L-Idopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

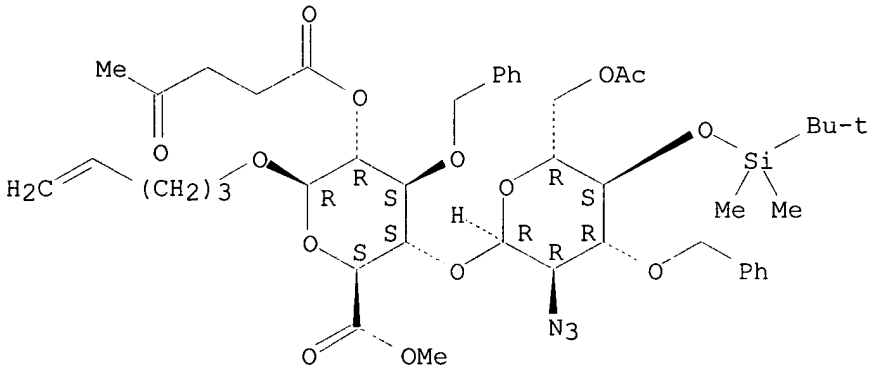
Absolute stereochemistry. Rotation (+).



RN 444118-75-6 HCAPLUS

CN .beta.-D-Glucopyranosiduronic acid, 4-pentenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-, methyl ester, 2-(4-oxopentanoate) (9CI) (CA INDEX NAME)

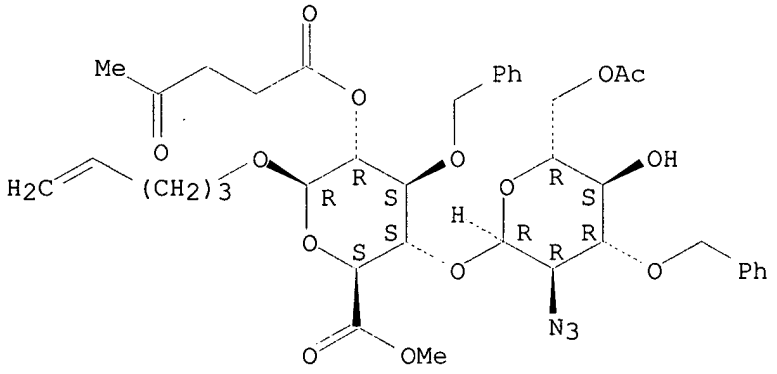
Absolute stereochemistry. Rotation (+).



RN 444118-76-7 HCAPLUS

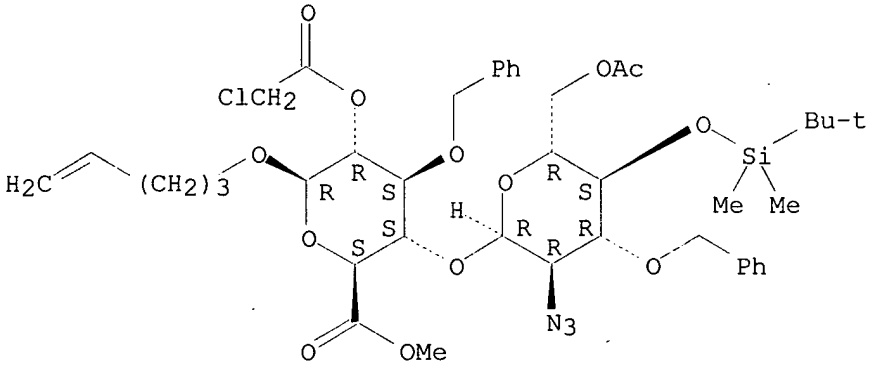
CN .beta.-D-Glucopyranosiduronic acid, 4-pentenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(4-oxopentanoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



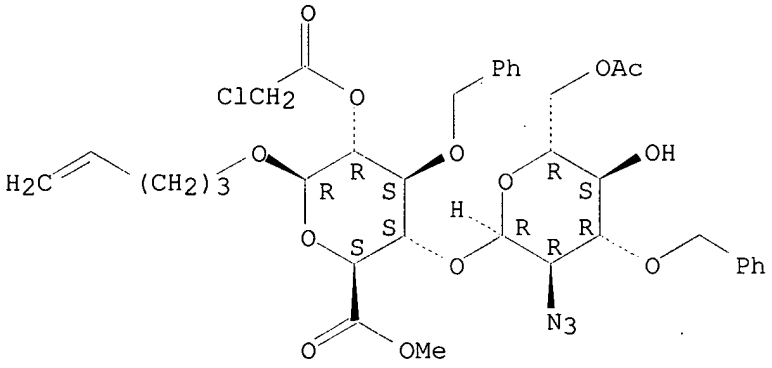
RN 444118-77-8 HCAPLUS
CN .beta.-D-Glucopyranosiduronic acid, 4-pentenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(chloroacetate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



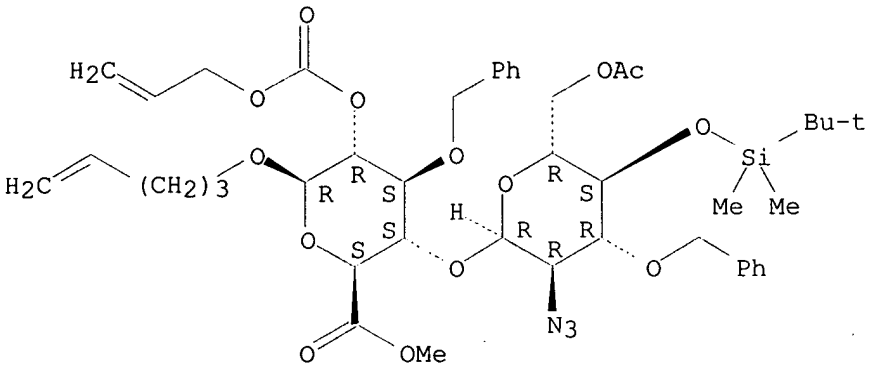
RN 444118-78-9 HCAPLUS
CN .beta.-D-Glucopyranosiduronic acid, 4-pentenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(chloroacetate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 444118-79-0 HCAPLUS
CN .beta.-D-Glucopyranosiduronic acid, 4-pentenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(2-propenyl carbonate) (9CI) (CA INDEX NAME)

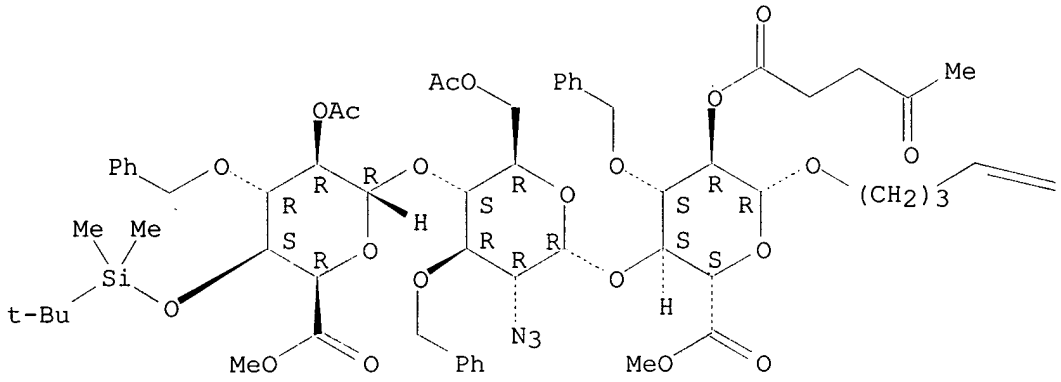
Absolute stereochemistry. Rotation (+).



RN 444118-88-1 HCAPLUS
CN .beta.-D-Glucopyranosiduronic acid, 4-pentenyl O-2-O-acetyl-4-O-[(1,1-dimethylethyl)dimethylsilyl]-6-methyl-3-O-(phenylmethyl)-.alpha.-L-idopyranuronosyl-(1.fwdarw.4)-O-6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-, methyl ester, 2-(4-oxopentanoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

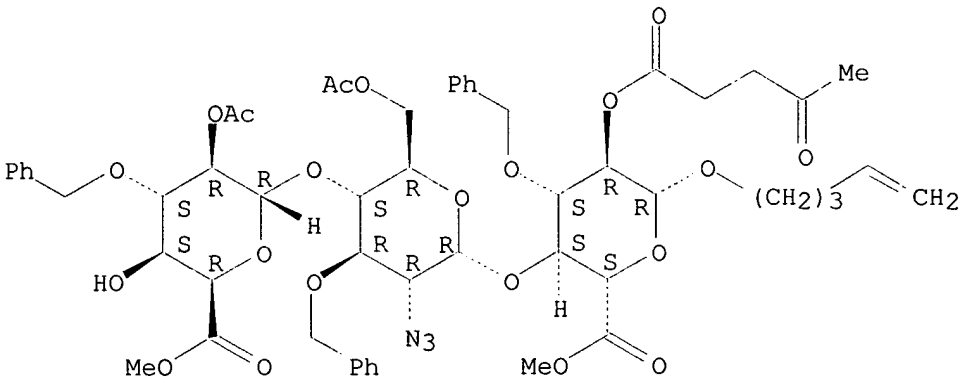
PAGE 1-A



PAGE 1-B

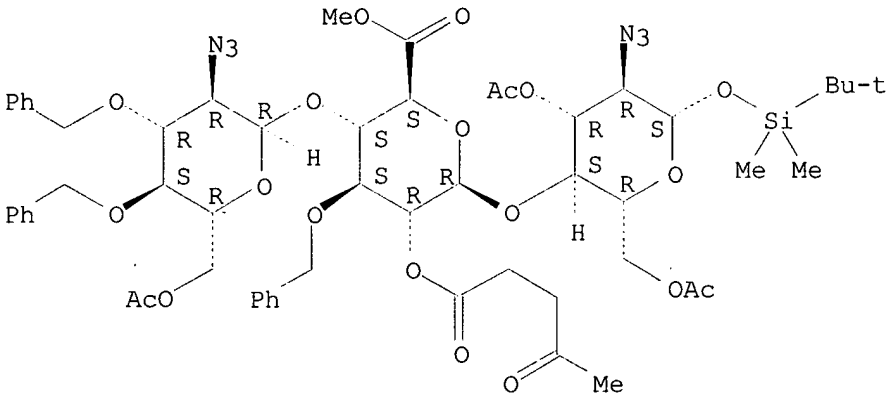
RN 444118-89-2 HCAPLUS
CN .beta.-D-Glucopyranosiduronic acid, 4-pentenyl O-2-O-acetyl-6-methyl-3-O-(phenylmethyl)-.alpha.-L-idopyranuronosyl-(1.fwdarw.4)-O-6-O-acetyl-2-azido-2-deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-3-O-(phenylmethyl)-, methyl ester, 2-(4-oxopentanoate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



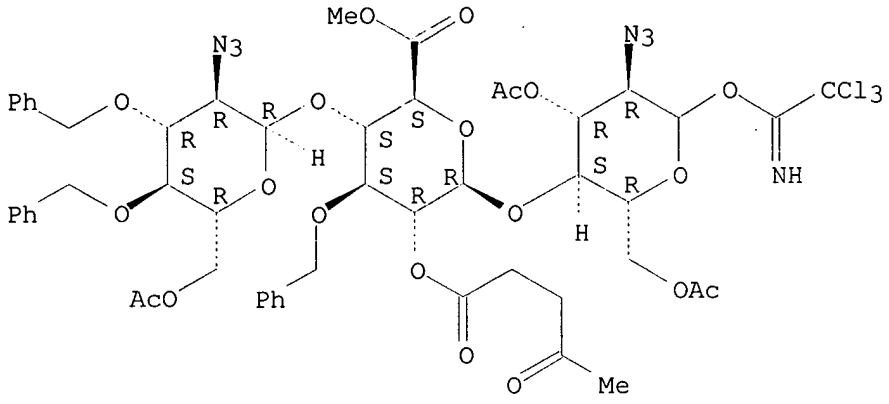
RN 444118-90-5 HCAPLUS
CN .beta.-D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-2-O-(1,4-dioxopentyl)-6-methyl-3-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-1-O-[(1,1-dimethylethyl)dimethylsilyl]-, 3,6-diacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



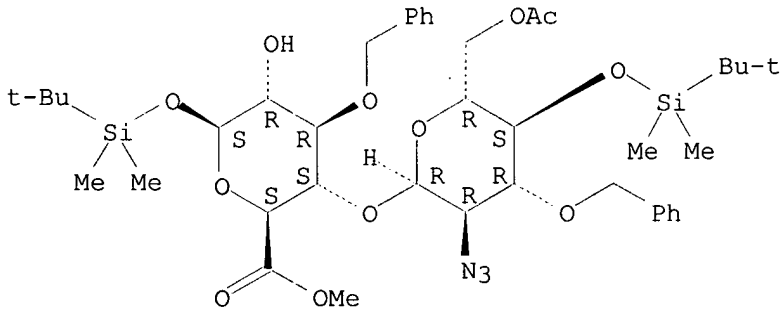
RN 444118-91-6 HCAPLUS
CN D-Glucopyranose, O-6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl-(1.fwdarw.4)-O-2-O-(1,4-dioxopentyl)-6-methyl-3-O-(phenylmethyl)-.beta.-D-glucopyranuronosyl-(1.fwdarw.4)-2-azido-2-deoxy-, 3,6-diacetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



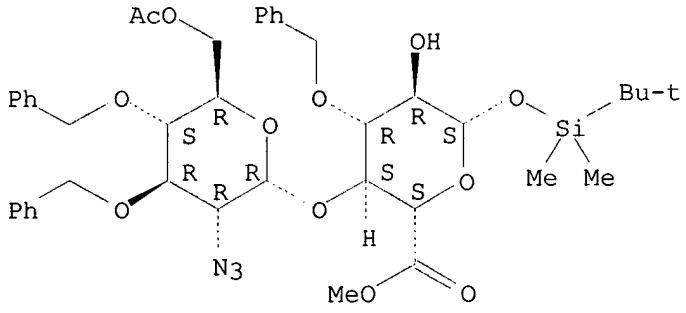
RN 444119-04-4 HCAPLUS
CN .beta.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-1-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



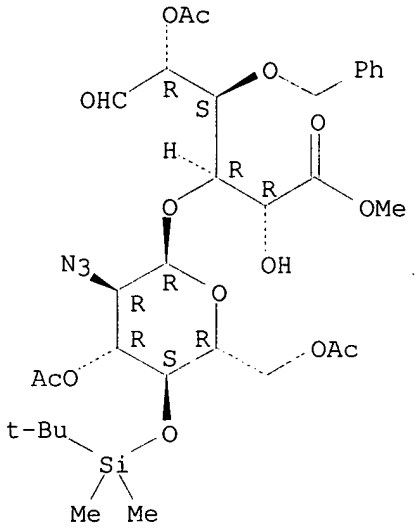
RN 444119-05-5 HCAPLUS
CN .beta.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-1-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



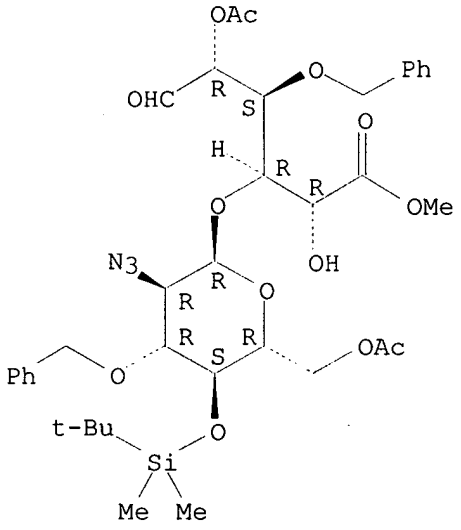
RN 444119-06-6 HCAPLUS
CN L-Iduronic acid, 4-O-[3,6-di-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



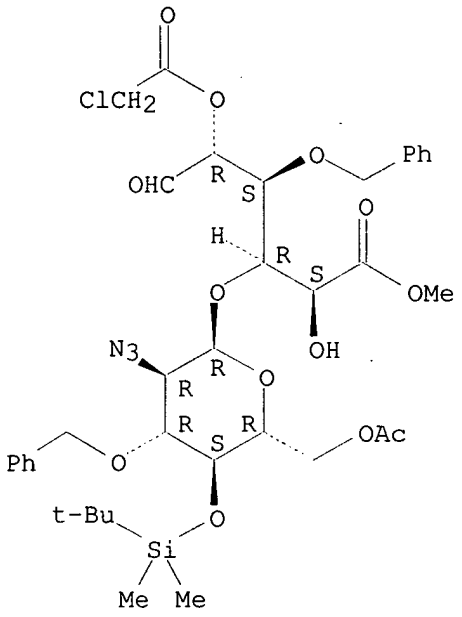
RN 444119-07-7 HCAPLUS
CN L-Iduronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



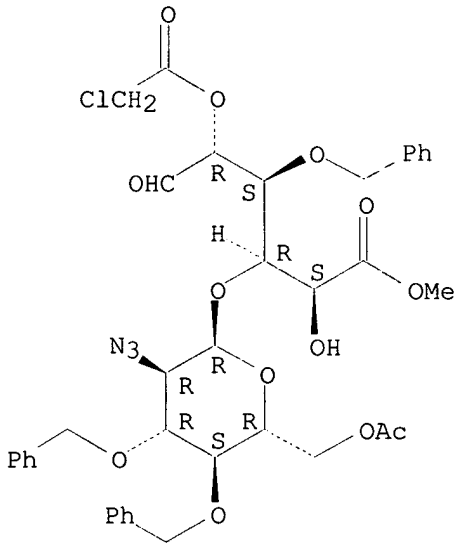
RN 444119-22-6 HCAPLUS
CN D-Glucuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(chloroacetate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 444119-23-7 HCAPLUS
CN D-Glucuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(chloroacetate) (9CI) (CA INDEX NAME)

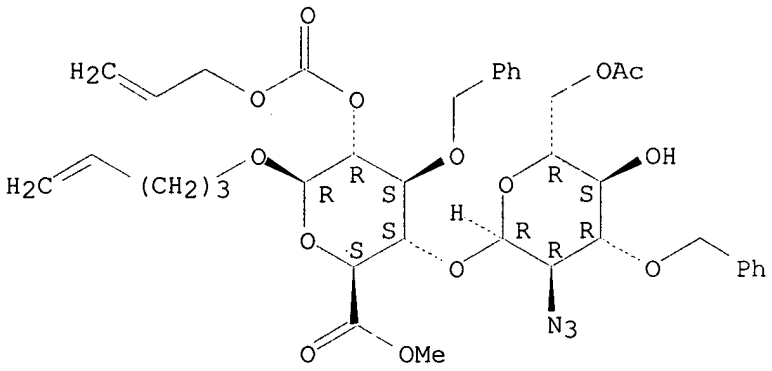
Absolute stereochemistry.



IT **444118-80-3P 444119-16-8P 444119-17-9P**
444119-18-0P 444119-19-1P 444119-20-4P
444119-21-5P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(solid-phase combinatorial libraries synthesis of glycosaminoglycans as potential receptors)
RN 444118-80-3 HCAPLUS
CN .beta.-D-Glucopyranosiduronic acid, 4-pentenyl 4-O-[6-O-acetyl-2-azido-2-

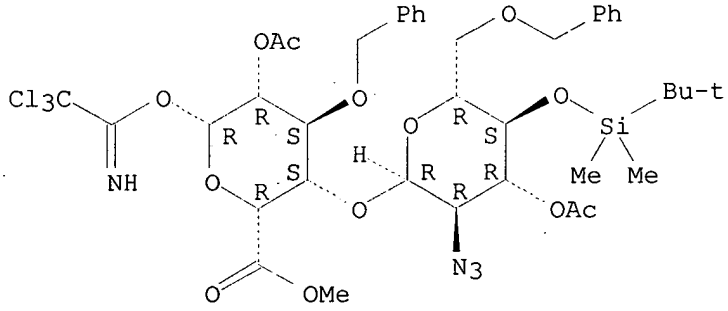
deoxy-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-(2-propenyl carbonate) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



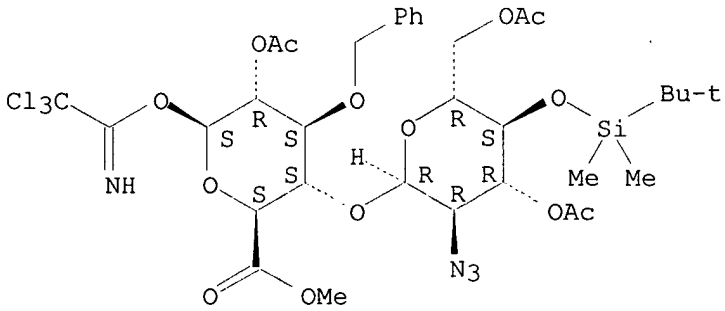
RN 444119-16-8 HCAPLUS
CN .beta.-L-Idopyranuronic acid, 4-O-[3-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-6-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 444119-17-9 HCAPLUS
CN .beta.-D-Glucopyranuronic acid, 4-O-[3,6-di-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

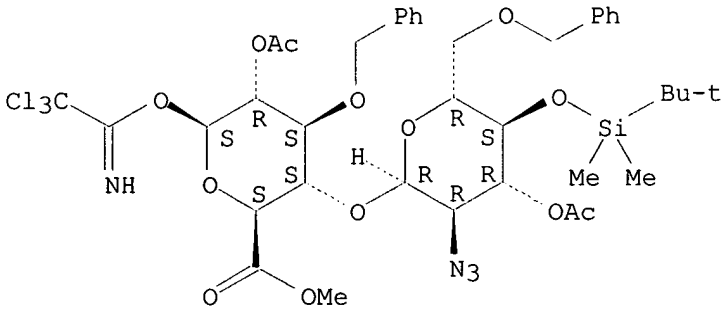
Absolute stereochemistry.



RN 444119-18-0 HCAPLUS

CN .beta.-D-Glucopyranuronic acid, 4-O-[3-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-6-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

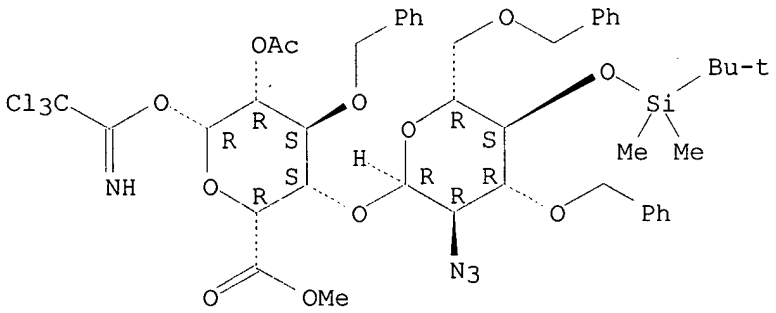
Absolute stereochemistry.



RN 444119-19-1 HCAPLUS

CN .beta.-L-Idopyranuronic acid, 4-O-[2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3,6-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

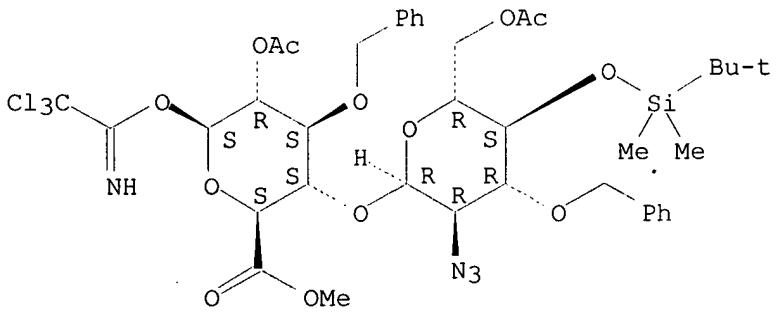
Absolute stereochemistry.



RN 444119-20-4 HCAPLUS

CN .beta.-D-Glucopyranuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

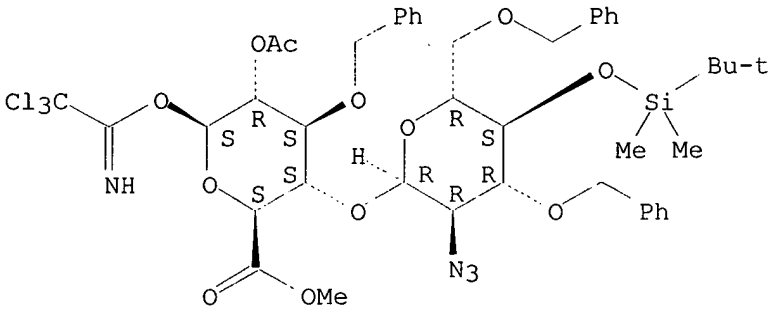
Absolute stereochemistry.



RN 444119-21-5 HCAPLUS

CN .beta.-D-Glucopyranuronic acid, 4-O-[2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3,6-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-acetate 1-(2,2,2-trichloroethanimidate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L38 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:501360 HCAPLUS
DN 137:263256
TI Conformational locking of the glycosyl acceptor for stereocontrol in the key step in the synthesis of heparin
AU **Orgueira, Hernan A.**; Bartolozzi, Alessandra; **Schell, Peter; Seeberger, Peter H.**
CS Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SO Angewandte Chemie, International Edition (2002), 41(12), 2128-2131 check
CODEN: ACIEF5; ISSN: 1433-7851
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
CC 33-8 (Carbohydrates)
AB A novel concept for the stereochem. control in the key step for heparin synthesis is reported. Locking the conformation of the glucuronic acid acceptor allowed the completely selective prepn. of the desired cis glycosides. Several key disaccharide chiral synthons, previously prepd. as anomeric mixts., have been prepd. utilizing this approach.
ST oligosaccharide chiral synthon stereoselective prepn heparin
IT Synthons
(chiral; stereoselective prepn. of oligosaccharide chiral synthons, to be used in the key step in the synthesis of heparin)
IT Conformation
Stereochemistry
(stereoselective prepn. of oligosaccharide chiral synthons, to be used in the key step in the synthesis of heparin)
IT Oligosaccharides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(stereoselective prepn. of oligosaccharide chiral synthons, to be used in the key step in the synthesis of heparin)
IT 9005-49-6P, Heparin, preparation
RL: PNU (Preparation, unclassified); PREP (Preparation)
(stereoselective prepn. of oligosaccharide chiral synthons, to be used in the key step in the synthesis of heparin)
IT 92955-17-4 135415-92-8 154920-28-2 243982-79-8 356068-08-1 444118-39-2 463350-33-6 463350-35-8 463350-36-9 463350-38-1 463350-40-5 463350-43-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(stereoselective prepn. of oligosaccharide chiral synthons, to be used in the key step in the synthesis of heparin)

IT 444118-41-6P 444118-42-7P 444118-44-9P 444118-45-0P 444118-47-2P
444118-48-3P 444118-50-7P 444118-51-8P 444118-53-0P 444118-54-1P
444118-55-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(stereoselective prepn. of oligosaccharide chiral synthons, to be used in the key step in the synthesis of heparin)
IT 87326-73-6P 87326-76-9P 444118-43-8P 444118-46-1P
444118-49-4P 444118-52-9P 444118-56-3P
444118-57-4P 463350-34-7P 463350-37-0P
463350-39-2P 463350-41-6P 463350-42-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(stereoselective prepn. of oligosaccharide chiral synthons, to be used in the key step in the synthesis of heparin)
RE.CNT 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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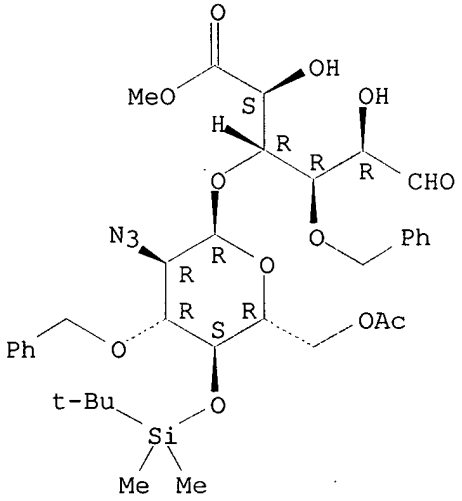
IT **444118-49-4P 444118-52-9P 444118-56-3P**
444118-57-4P 463350-34-7P 463350-37-0P
463350-39-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(stereoselective prepn. of oligosaccharide chiral synthons, to be used in the key step in the synthesis of heparin)

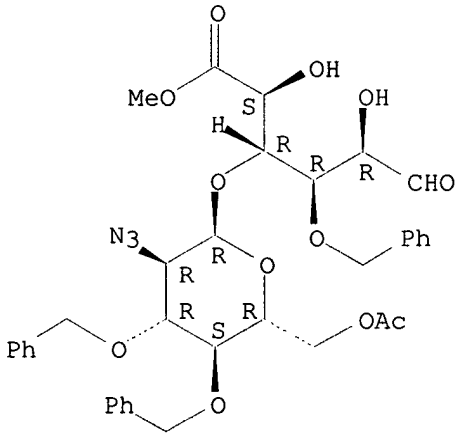
RN 444118-49-4 HCAPLUS
CN D-Glucuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



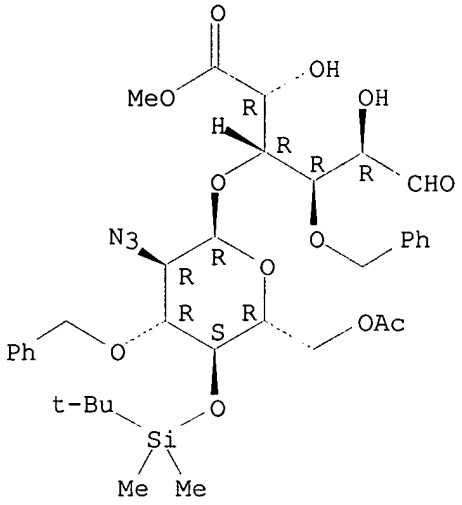
RN 444118-52-9 HCAPLUS
CN D-Glucuronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-3,4-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



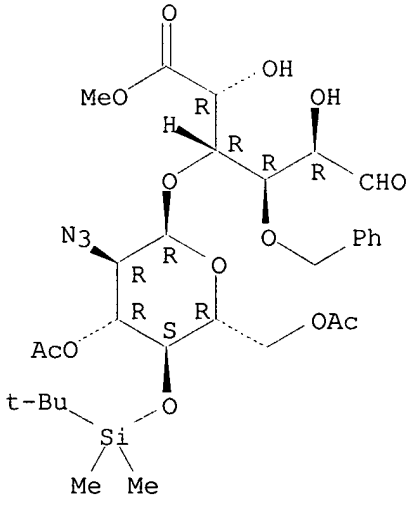
RN 444118-56-3 HCAPLUS
CN L-Iduronic acid, 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



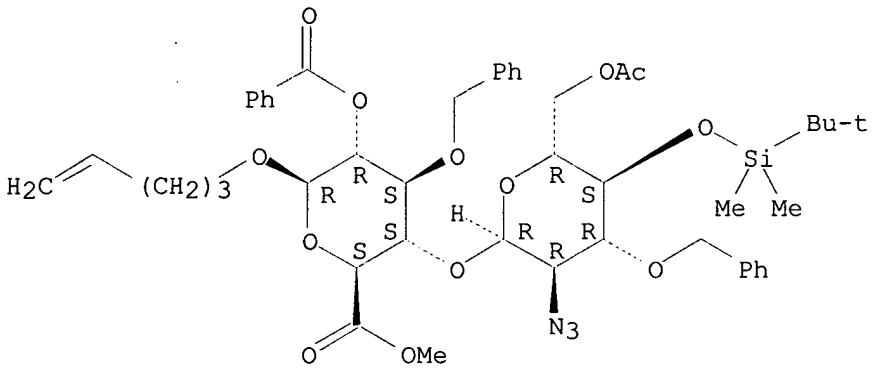
RN 444118-57-4 HCAPLUS
CN L-Iduronic acid, 4-O-[3,6-di-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



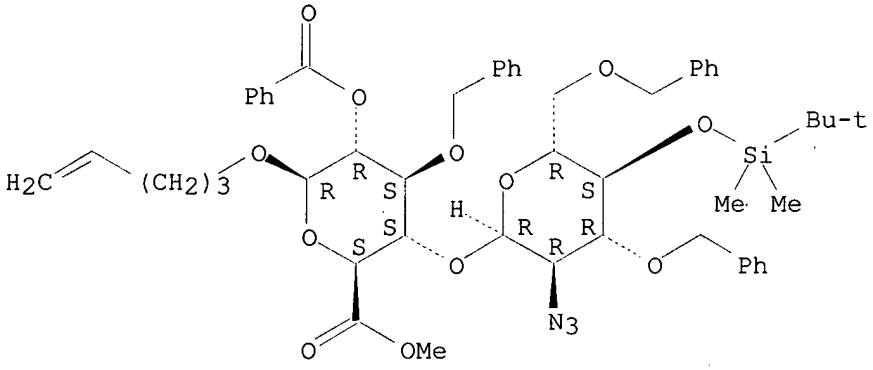
RN 463350-34-7 HCAPLUS
CN .beta.-D-Glucopyranosiduronic acid, 4-pentenyl 4-O-[6-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-benzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



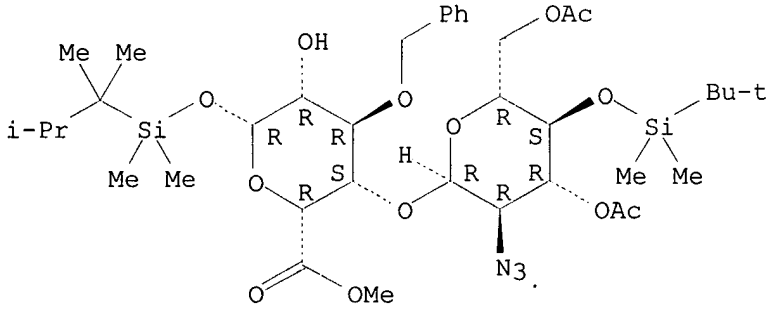
RN 463350-37-0 HCAPLUS
CN .beta.-D-Glucopyranosiduronic acid, 4-pentenyl 4-O-[2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-3,6-bis-O-(phenylmethyl)-.alpha.-D-glucopyranosyl]-3-O-(phenylmethyl)-, methyl ester, 2-benzoate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 463350-39-2 HCAPLUS
CN .beta.-L-Idopyranuronic acid, 4-O-[3,6-di-O-acetyl-2-azido-2-deoxy-4-O-[(1,1-dimethylethyl)dimethylsilyl]-.alpha.-D-glucopyranosyl]-1-O-[dimethyl(1,1,2-trimethylpropyl)silyl]-3-O-(phenylmethyl)-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d his

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     FILE 'REGISTRY' ENTERED AT 09:18:35 ON 19 NOV 2002
L1                  STR
L2               18 S L1
L3              296 S L1 FUL
                    SAV L3 KRISH054/A
L4                  STR L1
L5                9 S L4 CSS SAM SUB=L3
L6              137 S L4 CSS FUL SUB=L3
                    SAV L6 KRISH054A/A
L7                  STR L1
L8                  STR L7
L9                3 S L8 CSS SAM SUB=L6
L10              67 S L8 CSS FUL SUB=L6
                    SAV L10 KRICH054B/A
L11              16 S L10 AND (C65H80N6O27 OR C114H130N12O41 OR C70H84N6O26 OR C68H
L12               5 S L10 AND (C88H101N9O31 OR C76H98N6O26SI OR C113H133N9O36 OR C6
L13              46 S L10 NOT L11,L12
                    DEL KRICH?/A
                    SAV L10 KRISH054B/A
                    SAV L13 KRISH054C/A
L14              70 S L6 NOT L10-L13
L15              16 S L14 AND (C55H60CL3N7O18 OR C55H62N6O19 OR C49H54N4O15 OR C53H
L16              62 S L13,L15
                    SAV L16 KRISH054D/A
L17              54 S L14 NOT L16
L18             159 S L3 NOT L6
L19              17 S L18 AND (C42H51N3O13 OR C43H64CLN3O13SI2 OR C58H69N3O20 OR C4
L20              16 S L18 AND (C54H64N3O21 OR C55H67N3O21 OR C56H62CLN3O21 OR C70H8
L21               5 S L18 AND (C58H69N3O20 OR C52H65N3O12SI OR C45H45CL3N4O13 OR C5
L22              21 S L20,L21
                    SAV L22 KRISH054E/A

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L23               0 S L16 OR L22

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L24               6 S L16 OR L22

     FILE 'HCAPLUS' ENTERED AT 10:52:25 ON 19 NOV 2002
L25              28 S L16 OR L22
L26               2 S L25 AND (SEEBERGER ? OR ORGUEIRA ? OR SCHELL ?)/AU
L27              26 S L25 AND (PD<=20010123 OR PRD<=20010123 OR AD<=20010123)
L28               1 S L25 NOT L26,L27
L29              25 S L27 NOT L26

     FILE 'REGISTRY' ENTERED AT 10:55:14 ON 19 NOV 2002

     FILE 'USPATFULL, USPAT2' ENTERED AT 10:55:31 ON 19 NOV 2002

     FILE 'HCAPLUS' ENTERED AT 10:56:32 ON 19 NOV 2002
                SEL RN L26

     FILE 'REGISTRY' ENTERED AT 10:59:06 ON 19 NOV 2002
L30             128 S E1-E128
L31              95 S L30 NOT L16,L22
L32              26 S L31 AND L3
L33              13 S L32 AND (C61H81N3O21SI OR C36H44CLN3O13 OR C39H51CL2N3O14SI O
L34              69 S L31 NOT L32
L35              48 S L34 AND OC5/ES
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FILE 'HCAPLUS' ENTERED AT 11:05:28 ON 19 NOV 2002

L36 1 S L33
L37 1 S L36 AND L26
L38 2 S L26,L37